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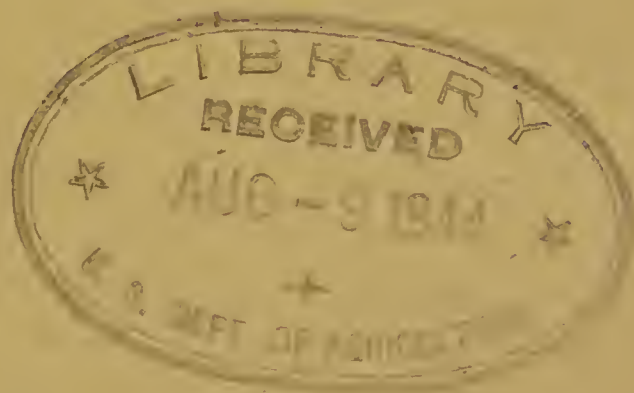
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UNITED STATES DEPARTMENT OF AGRICULTURE
OFFICE OF COOPERATIVE EXTENSION WORK

WASHINGTON, D. C.

ISSUED, APRIL, 1931

COOPERATIVE
EXTENSION WORK
1929



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EXTENSION SERVICE

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OFFICE OF COOPERATIVE EXTENSION WORK

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¹ Revised to March 1, 1931.

COOPERATIVE EXTENSION WORK, 1929¹

Prepared by the Office of Cooperative Extension Work

C. B. SMITH, Chief

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INTRODUCTION

During the fiscal year 1928-29 there was considerable expansion in extension work. Some 495 new county extension agents were added to the force, over 200 of whom were home demonstration agents. The number of county club agents grew from 148 to 254, and club enrollment increased by more than 92,000, making the total boys' and girls' club enrollment at the end of the calendar year over 756,000. A survey made during the year indicated that an average of about 32 per cent of the time of all extension workers was given to the promotion of boys' and girls' 4-H club work.

The placing of special emphasis on the economic phases of extension work was continued. The establishment of the Federal Farm Board served to direct attention particularly to the field of cooperative marketing and the adjustment of production in agriculture to accord more fully with market demands. Extension forces, although not assuming responsibility for the organization of national farmer cooperatives, closely cooperated with the board in its efforts along these lines. The object was to give the farmer himself a larger voice than heretofore in the disposal of his products in the markets of the world.

Economic extension work in the field of farm management likewise made substantial progress during the year and became a basic part of the extension program in a majority of the States (Fig. 1.) The farm-management extension program was designed to assist farmers in adjusting their businesses (1) by the dissemination of available information on the prospects for returns in the production of different farm commodities, and (2) by assisting individuals and groups of farmers in adjusting their farm businesses so as to make larger incomes. In a number of States, groups of farmers united in the employment of a special farm-management adviser to aid them in keeping their farm

¹ Funds for extension work are appropriated for fiscal years ending on June 30, whereas extension agents prepare their reports for calendar years. For this reason, statements of funds expended are given for the fiscal year ended June 30, 1929, and results of work done for the calendar year ended December 31, 1929.

NOTE.—Cooperative extension work in agriculture and home economics, authorized by the Smith-Lever Act of May 8, 1914, is carried on cooperatively by the United States Department of Agriculture and the State agricultural colleges. This report was written and printed in accordance with a provision of the act of Congress of March 4, 1915, entitled "An act making appropriations for the Department of Agriculture for the fiscal year ending June 30, 1916." (38 Stat. L. p. 1110.)

records and in summarizing and interpreting them at the end of the year. Farmers paid from \$17 to \$34 per year for this service.

Decided improvement was also made during the year in the short-time farm-credit situation by the aid given to an increased number of farmers in taking their annual inventories and making out credit statements for filing at their banks. This type of extension work, which was carried on extensively in a large number of States, resulted in the shifting of a large amount of expensive short-time farm credit over into the more efficient form of bank credit.



FIGURE 1.—County agricultural agent inspecting farmer's records

Considerable advancement was made in the dissemination to farmers of agricultural outlook information. The majority of the States published an annual State agricultural outlook report and also monthly agricultural economic reviews. The purpose of these outlook reports was to assist farmers in planning their businesses by furnishing them with the best available information on the general agricultural situation and the prospects for different farm products.

Another phase of extension that made substantial progress was recreation. The Playground and Recreation Association of America assigned three of its staff for the year to cooperate with extension forces in the various States in teaching rural youth and adults to play, showing them how, and training local leaders to carry on in the community after the recreation specialists had gone. The children's Bureau of the Federal Department of Labor also cooperated in this work by furnishing one of its staff to give a substantial part of her time to teaching extension forces games and play. These forces operated in 44 States and gave training to more than 40,000 rural leaders. This work meets a great need in rural life. When people play together,

they are better able to work together. Singing and musical appreciation are included in the training.

On the whole, 1929 was a year of substantial progress and expansion in extension.

FUNDS AND STAFF

The total amount expended for cooperative extension work during the fiscal year ended June 30, 1929, was \$23,286,648.77, which was \$2,203,322.77 more than the amount expended for the work in 1928. Of the additional funds expended, \$1,382,362.94 came from Federal sources, the greater part of which was made available by the Capper-Ketcham Act of May 22, 1928, by the increase of \$280,000 in the supplementary Smith-Lever appropriation, and by an emergency appropriation for the employment of agents in counties in the flood-devastated areas; \$322,793.57 came from State and college sources; and \$498,166.26 came from county appropriations, local organizations, and individuals. Of this total amount, \$22,870,026.76, or 98.2 per cent, was spent in the 48 States and the Territory of Hawaii, and \$416,622.01 or 1.8 per cent in the administrative activities of the Federal office in Washington, D. C.

Approximately 37.9 per cent of the total funds came from Federal sources, 28.1 per cent from State sources, 28.9 per cent from county appropriations, and 5.1 per cent from local organizations and individuals.

The amount expended for county extension agents was \$14,406,152.28, or 61.9 per cent; for State subject-matter specialists, \$4,549,348.10, or 19.5 per cent; for administration and supervision in the States, \$3,914,526.38, or 16.8 per cent.

Nineteen States and the Territory of Hawaii were unable to expend their entire allotments of Federal Smith-Lever and Capper-Ketcham funds and had unexpended balances on June 30, 1929, as shown in Table 1.

TABLE 1.—*Unexpended balances of allotments of Federal Smith-Lever and Capper-Ketcham funds, June 30, 1929*

State	Unexpended balance		State	Unexpended balance	
	Federal Smith-Lever	Federal Capper-Ketcham		Federal Smith-Lever	Federal Capper-Ketcham
California.....		\$9,709.32	New Jersey.....		\$4,550.83
Connecticut.....		77.64	New Mexico.....		8,351.47
Delaware.....		92.44	New York.....	\$904.18	99.56
Florida.....	\$33.70	2,931.94	Oklahoma.....		.60
Georgia.....		177.51	Oregon.....		1,405.12
Idaho.....		9,260.51	Rhode Island.....	310.44	8,668.39
Illinois.....		12,571.51	Washington.....	2,705.59	1,937.53
Kentucky.....	3,083.63		Wyoming.....		462.61
Louisiana.....		8,558.01	Hawaii.....	16,120.98	10,092.55
Minnesota.....		3,955.28			
Montana.....		6,079.53	Total.....	23,158.52	88,982.35

The Congress extended the benefits of the Smith-Lever agricultural extension act of May 8, 1914, and of acts supplementary thereto, to the Territory of Hawaii in an act approved by the President on May 16, 1928. The legislature of the Territory not being in session, Gov. W. R. Farrington gave the assent of the Territory of Hawaii to the provisions and requirements of the said acts of Congress on June 28,

1928. When the legislature of the Territory convened, it gave its assent in an act approved April 12, 1929. The work was begun in cooperation with the University of Hawaii in October, 1928.

The Capper-Ketcham Act of May 22, 1928, authorized the payment of \$20,000 of Federal funds annually to each State and the Territory of Hawaii beginning July 1, 1928, and further authorized to be appropriated for the fiscal year following, and for each year thereafter, the additional sum of \$500,000 to be allotted to each State and the Territory of Hawaii in the proportion which the rural population of each bears to the total rural population of the 48 States and Hawaii. The additional sum must be offset by an equal amount from sources within the State or Territory for maintenance of cooperative agricultural extension work. The act further provides that—

(1) At least 80 per centum of all appropriations under this act shall be utilized for the payment of salaries of extension agents in counties of the several States to further develop the cooperative extension system in agriculture and home economics with men, women, boys, and girls; (2) funds available to the several States and the Territory of Hawaii under the terms of this act shall be so expended that the extension agents appointed under its provisions shall be men and women in fair and just proportions; (3) the restriction on the use of these funds for the promotion of agricultural trains shall not apply.

In several States there was some delay in obtaining the assent of the governor or of the legislature to the provisions and requirements of the Capper-Ketcham Act; consequently the funds were not paid to those States until late in the year. In other States it was necessary to make arrangements in advance with counties in order to comply with the provisions of the act. These delays account for the unexpended balances of Federal Capper-Ketcham funds in a number of States at the close of the fiscal year.

The legislatures of the States and of the Territory of Hawaii gave their assent to the provisions and requirements of the Capper-Ketcham Act of May 22, 1928, on various dates, as shown in Table 2.

TABLE 2.—*Dates on which legislatures assented to the provisions of the Capper-Ketcham Act of May 22, 1928*

State	Date of assent	State	Date of assent
Alabama.....	¹ July 14, 1928	Nevada.....	Mar. 5, 1929
Arizona.....	Feb. 21, 1929	New Hampshire.....	Apr. 18, 1929
Arkansas.....	Mar. 23, 1929	New Jersey.....	Apr. 2, 1929
California.....	May 13, 1929	New Mexico.....	Mar. 11, 1929
Colorado.....	May 7, 1929	New York.....	May 20, 1929
Connecticut.....	May 1, 1929	North Carolina.....	Mar. 15, 1929
Delaware.....	Mar. 13, 1929	North Dakota.....	Mar. 11, 1929
Florida.....	June 8, 1929	Ohio.....	Apr. 5, 1929
Georgia.....	¹ June 14, 1928	Oklahoma.....	Mar. 16, 1929
Idaho.....	Mar. 18, 1929	Oregon.....	Feb. 5, 1929
Illinois.....	Mar. 6, 1929	Pennsylvania.....	Apr. 30, 1929
Indiana.....	Mar. 4, 1929	Rhode Island.....	Apr. 19, 1929
Iowa.....	Apr. 5, 1929	South Carolina.....	Mar. 15, 1929
Kansas.....	Mar. 7, 1929	South Dakota.....	Mar. 18, 1929
Kentucky.....	Feb. 18, 1930	Tennessee.....	Apr. 13, 1929
Louisiana.....	July 9, 1928	Texas.....	Feb. 26, 1929
Maine.....	Mar. 11, 1929	Utah.....	Mar. 22, 1929
Maryland.....	Apr. 2, 1929	Vermont.....	Mar. 14, 1929
Massachusetts.....	July 23, 1928	Virginia.....	Feb. 11, 1930
Michigan.....	Apr. 18, 1929	Washington.....	Mar. 9, 1929
Minnesota.....	Apr. 9, 1929	West Virginia.....	Feb. 26, 1929
Mississippi.....	May 7, 1930	Wisconsin.....	Apr. 9, 1929
Missouri.....	May 3, 1929	Wyoming.....	Dec. 19, 1929
Montana.....	Mar. 6, 1929	Hawaii.....	Apr. 12, 1929
Nebraska.....	Apr. 22, 1929		

¹ Governor's assent.

Of the Federal Capper-Ketcham funds expended during the year, approximately 86 per cent was for salaries of county extension agents and 14 per cent for other purposes. About 50 per cent of the total was expended for women extension agents.

On June 30, 1929, there were 5,691 persons employed on the field staff in the 48 States and the Territory of Hawaii, an increase of 530 during the year. Of these, 2,264 were white county agricultural agents, 188 assistants, and 172 negro county agents; 1,107 white county home demonstration agents, 48 assistants, 12 urban home demonstration agents, and 125 negro home demonstration agents; 231 county boys' and girls' club agents and 23 assistants; 484 supervisors and administrative officers; and 1,037 subject-matter specialists.

Of the new workers added during the year, 495 were county workers, 2 administrative and supervisory workers, and 33 subject-matter specialists. Of the new county workers, 77 were white county agricultural agents, 57 assistants, 12 negro county agents, 201 county home demonstration agents, 25 assistants, 17 negro home demonstration agents, 95 county club agents of whom about 60 were employed during the summer months only, and 11 assistant county club agents.

County agricultural agents were employed in 2,323 of the 3,077 counties in the 48 States and Hawaii, and county home demonstration agents in 1,286 counties, an increase of 67 counties with agricultural agents and 245 with home demonstration agents.

W. A. Lloyd, in charge of extension work in the Western States, was granted a year's furlough to organize and direct the extension service in the Territory of Hawaii. He was appointed dean and director of the Hawaiian extension service on October 25, 1928, when the work was begun in cooperation with the University of Hawaii. Mary A. Rokahr was appointed as extension economist in home management in the office of cooperative extension work on February 1, 1929. The position of extension forester in the Washington office was vacant during the year. R. G. Foster, field agent in club organization for the Eastern States, continued on furlough for advanced study at Cornell University until June 1, 1929. Roud McCann resigned as director of extension work in Colorado on January 15, 1929, and Charles A. Lory, president of the agricultural college, acted as director. G. I. Christie, who had been director of extension work in Indiana for the last 13 years, resigned in August, 1928, and was succeeded by J. H. Skinner.

The benefits of the Smith-Lever agricultural extension act of May 8, 1914, were extended to the Territory of Alaska by an act approved by the President February 23, 1929. The legislature of the Territory of Alaska gave its assent to the provisions and requirements of these two acts in an act approved by Governor Parks May 2, 1929, and designated the Alaska Agricultural College and School of Mines as the college to administer and carry on extension work in cooperation with the United States Department of Agriculture. However, no Federal funds were appropriated for this purpose during the fiscal year.

SIGNIFICANT RESULTS

The statistical summary of extension accomplishments for 1929 contains information from the reports of 3,999 county extension agents who were assisted by the equivalent of 968 full-time subject-matter specialists. This total shows an increase in the number

reporting over the previous year of 317 county workers and 58 specialists.

The various subject-matter lines of work continued to receive the same proportion of the time of extension workers as in previous years. (Table 5.) During the 6-year period, 1924-1929, there was little, if any, shift in extension emphasis in the country as a whole so far as subject matter is concerned.

IMPROVED PRACTICES ADOPTED

Since the ultimate objective of extension teaching is to bring about improvement in agriculture, home economics, and rural life through changed farmers and farm women, the extent to which rural people have been influenced by extension activities to make changes in farm and home practices presents the best single picture of the results of extension effort.

The total number of instances of the adoption of better practices by farmers and farm women reported by all extension agents in 1929 was 5,170,343, or 510,000 greater than that in 1928. Table 3 gives the number of improved practices by projects as reported for the years 1925 to 1929, inclusive.

TABLE 3.—*Improved practices adopted by farmers and farm women as the result of extension activities, as reported by all county extension agents, 1925-1929*

Item	Better practices adopted				
	1925	1926	1927	1928	1929
Soils.....	252, 041	257, 588	279, 774	306, 491	351, 894
Cereals.....	185, 596	261, 621	309, 692	250, 913	253, 110
Legumes and forage.....	201, 033	225, 287	241, 956	226, 171	228, 350
Potatoes, cotton, and other special crops.....	182, 876	179, 639	166, 909	205, 228	213, 872
Horticulture.....	271, 231	294, 007	344, 836	354, 516	393, 395
Forestry.....	6, 574	10, 074	15, 807	18, 902	21, 350
Dairy.....	384, 148	418, 345	429, 105	461, 888	488, 808
Animal husbandry.....	167, 462	171, 533	198, 516	223, 554	235, 136
Poultry.....	237, 817	227, 352	259, 222	260, 648	318, 553
Agricultural engineering.....	114, 236	120, 200	151, 478	140, 460	172, 170
Rodents and insects.....	202, 558	265, 255	259, 321	220, 956	177, 161
Agricultural economics.....	430, 074	492, 176	492, 495	526, 700	669, 892
Foods.....	305, 567	325, 455	397, 517	404, 517	450, 784
Nutrition.....	162, 449	168, 029	168, 293	211, 991	206, 243
Clothing.....	348, 904	299, 221	297, 245	320, 202	392, 414
Home management.....	90, 872	74, 038	106, 677	99, 156	126, 369
House furnishings.....	96, 462	106, 789	126, 417	141, 034	167, 028
Home health and sanitation.....	125, 856	128, 580	164, 804	179, 687	177, 165
Miscellaneous.....	57, 631	79, 305	108, 673	109, 083	126, 649
Total.....	3, 823, 387	4, 104, 494	4, 518, 737	4, 662, 097	5, 170, 343

4-H CLUB WORK

There was a large increase in the number of different boys and girls participating in 4-H club work during 1929, the number being 756,096 as compared with 663,940 in 1928. (Table 4.) This increase was due to the additional extension workers employed on Capper-Ketcham funds and to the increased emphasis placed upon club work by the extension workers previously employed.

TABLE 4.—*Enrollment and accomplishment of boys' and girls' 4-H club work, 1925-1929*

Item	1925	1926	1927	1928	1929
Junior clubs.....	41,286	41,234	44,188	46,671	52,180
Total enrollment.....	565,046	586,156	619,712	663,940	756,096
Different boys enrolled.....	224,633	234,078	249,553	270,534	303,509
Different girls enrolled.....	340,413	352,078	370,159	393,406	452,587
Total completing.....	329,574	368,305	399,107	445,594	507,487
Different boys completing.....	133,076	145,202	153,324	175,069	201,910
Different girls completing.....	196,498	223,103	245,783	270,525	305,577
Projects started.....	1,079,604	1,161,024	1,330,239	1,466,584	1,614,149
Projects completed.....	589,440	673,997	776,029	882,795	995,262

A special survey of extension workers in 38 States made during the year indicated that about one-third of the time of extension workers was devoted to work with boys and girls and two-thirds to work with adults. Table 5 shows the percentage of time spent on adult and junior work by the various groups of extension workers.

TABLE 5.—*Percentage of time devoted to adult and junior work by extension workers, as shown by a survey made in 38 States in 1929*

Item	All agents	Agents			Specialists	
		County agricultural	Home demonstration	Boys' and girls' club	Agricultural	Home economics
Junior work.....	31.97	25.16	42.49	92.30	15.86	20.28
Adult work.....	68.03	74.84	57.51	7.70	84.14	79.72

FARMERS' INSTITUTES

A total of 11 States reported farmers' institutes conducted on a state-wide basis during the year ended June 30, 1929. Altogether 2,600 institutes were held, extending over a period of 3,941 days and including 9,029 sessions, with an attendance of 1,266,484 persons. The instruction at these institutes was given by 729 persons, many of whom were practical farmers and farm women. A total of \$167,631.96 was expended for farmers' institutes, \$60,232.89 of which came from local contributions.

FOREIGN EXTENSION ACTIVITIES

In order that extension workers might be informed regarding significant developments in extension work as conducted in other countries, the division of extension studies and teaching, as in previous years, reviewed all foreign reports reaching the department and issued quarterly reviews of extension progress and accomplishments in foreign lands.

COMMITTEE ON INSTRUCTION IN AGRICULTURE, HOME ECONOMICS, AND MECHANIC ARTS

The committee on instruction in agriculture, home economics, and mechanic arts of the Association of Land-Grant Colleges and Universities, of which E. H. Shinn served as chairman, completed a third

year of studying a method of measuring college-teaching efficiency. A study of the personal contacts in the freshman year was announced as the next subject of investigation for the committee. The results of these studies are presented each year at the annual meeting of the Association of Land-Grant Colleges and Universities.

OTHER STUDIES UNDER WAY

In addition to those studies already mentioned, other extension problems received considerable attention. A job analysis of the activities of county agricultural agents was undertaken. Another study related to the sources of information used in extension circular letters. Several thousand circular letters sent to the office in connection with annual reports were analyzed.

In cooperation with the Office of Information, all the material relating to agriculture and home economics contained in a representative number of issues of typical weekly and daily papers published in all parts of the country was classified.

EXTENSION STUDIES AND TEACHING

During the year the offices of agricultural instruction and extension studies were consolidated, the new division being known as the division of extension studies and teaching. The scientific personnel of the division consisted of M. C. Wilson, in charge; E. H. Shinn, senior agriculturist; C. H. Schopmeyer, senior agriculturist; and J. M. Stedman, associate agriculturist.

Many of the duties of the section of agricultural instruction are to be continued, but more attention will be given to field studies and to the development of training courses for professional improvement of the extension personnel.

FIELD STUDIES

Four new extension studies were made during the year—in South Carolina, Missouri, Kentucky, and New Jersey. These make a total of 25 States cooperating in the farm and home surveys and other studies the division has made to date.

The South Carolina study related to the home-garden project as carried on by home demonstration workers.

The kitchen-improvement extension program was the subject of the studies in Kentucky and New Jersey. In Missouri, factors that influence attendance at and effectiveness of extension meetings were studied. Studies of the membership of home demonstration clubs and of the problem of reaching women who have not joined such clubs were also made in South Carolina, New Jersey, and Kentucky.

A total of 992 records was obtained during the year, making a grand total of 15,941 farm, home, and leadership records taken to date. Additional members of the State extension services to the number of 29 and 2 additional members of the staff of this office participated in the collection of extension research data by the survey method.

LEADERSHIP STUDY

The information obtained from the 326 local extension leaders in Kansas and Nebraska in 1929 was summarized and reports prepared for distribution to the field. For the first time detailed information

was available as to the extent to which local leaders engage in leadership activities and the amount of time required by each. (Table 6.) In the areas studied in Kansas and Nebraska, the average local leader devoted 16 days per year to leadership work, the activities requiring more than 1 day of time each being attendance at leader-training meetings, preparation of subject matter for presentation to others, the presentation of subject matter by means of method-demonstration meetings, and assisting with extension exhibits. Further studies of local leadership will have to be made in order to bring out the relative importance of the various leadership activities engaged in.

TABLE 6.—*Time spent on various leadership activities by 326 local leaders in all lines of extension work in Kansas and Nebraska, 1929*

Leadership activity	Percent- age of leaders report- ing ac- tivity	Days per year devoted to activity	Leadership activity	Percent- age of leaders report- ing ac- tivity	Days per year devoted to activity
Assist in outlining programs and projects.....	48. 16	0. 79	Visit 4-H club members.....	23. 93	0. 51
Attend leader-training schools..	75. 15	2. 96	Get and make reports.....	50. 92	. 57
Prepare subject matter.....	59. 51	1. 29	Assist with achievement days..	54. 91	. 87
Conduct result demonstrations..	18. 71	. 62	Assist with exhibits.....	51. 84	1. 01
Obtain cooperators.....	23. 62	. 27	Obtain signers for farm bureau petitions.....	26. 07	. 42
Arrange for meetings.....	53. 07	. 78	Obtain members for 4-H clubs..	19. 02	. 20
Advertise meetings.....	32. 82	. 33	Select and train judging and demonstration teams.....	20. 24	. 31
Present subject matter through—			Select 4-H club winners.....	7. 06	. 03
Method demonstrations.....	65. 95	1. 86	Solicit awards.....	3. 68	. 04
General talks at meetings....	51. 84	. 65	Direct recreational activities of 4-H clubs.....	17. 48	. 21
Farm and home visits.....	30. 98	. 68	Miscellaneous.....	5. 52	. 14
Other personal contacts.....	30. 98	. 39			
Assist with tours and trips.....	26. 69	. 45			
Attend other meetings.....	34. 97	. 93	Total.....		16. 34

It is interesting to compare the effectiveness of local leadership in the New Jersey, South Dakota, Kansas, and Nebraska areas in terms of numbers of people influenced to adopt the recommended practices, and the number of practices changed as the result of leaders' efforts. (Table 7.)

TABLE 7.—*Extent to which local leaders pass on information to others, as shown by surveys in Kansas, Nebraska, New Jersey, and South Dakota.*

Item	Kansas	Nebraska	New Jersey	South Dakota
Leaders interviewed.....	171	155	247	169
Percentage passing on information to others.....	86. 6	83. 9	87. 4	87. 0
Farms or homes influenced to change practices per leader (all leaders).....	11. 7	12. 8	13. 0	11. 7
Practices changed per leader due to leader activities (all leaders).....	29. 1	42. 8	18. 3	18. 6

Practically the same percentage of leaders in each of the four areas passed on information to others, the highest being slightly more than 87 per cent, in the New Jersey area, and the lowest 84 per cent, in the Nebraska area. There was also remarkable uniformity in the number of farms or homes influenced to adopt better practices, the range of variation being from 11.7 in Kansas and South Dakota to 13 in New Jersey. There was greater variation in the number of practices

changed per leader largely due to the different units into which the subject matter was divided for passing on by local leaders in the four areas.

The fact that about 87 per cent of all local leaders may be counted on to pass on information to others and that about 12 persons are influenced per leader on the average, regardless of variation in the use of local leaders in the four areas studied, suggests the possibility that these figures may represent the normal contribution of local leaders to the advancement of the local extension program. The great uniformity in the average number of persons influenced per leader in the four areas studied raises the question, whether 12 persons do not represent about that proportion of the normal circle of close friends and acquaintances of the local leader who are in position to make use of the better practices sponsored. Greater progress will probably result from the establishment of new circles of influence around new leaders rather than from an attempt to increase the size of the circles of influence of old leaders.

NEBRASKA STUDY

The general study of the effectiveness of extension in Hamilton County, Nebr., field data for which were obtained in 1929, has been completed and the results published by the Nebraska Extension Service as Extension Circular 25, *Extension Results as Influenced by Various Factors*. For purposes of comparison, information for 16 other areas in which studies had been made, was presented alongside the information from the Nebraska area. (Table 8.) With regard to the number of farmers and home makers making use of extension information, the Nebraska area studied compares favorably with the similar areas studied in 16 other States.

TABLE 8.—*Farms and homes adopting practices in a Nebraska area as compared with these in 16 other areas*

Item	Nebraska area		16 other areas	
	Number	Per cent	Number	Per cent
Farm records obtained.....	312	-----	10,421	-----
Farms on which some practice had been changed.....	282	90	8,249	79
Average number of practices changed per farm.....	5.4	-----	3.8	-----
Farms on which agricultural practices had been changed.....	276	88	7,808	75
Average number of agricultural practices changed per farm.....	4.5	-----	3.1	-----
Homes in which home-economics practices had been changed..	126	40	3,287	32
Average number of home-economics practices changed per home.....	2.3	-----	2.3	-----

METHODS OF TEACHING

During 1929 subject-matter workers were interested in three kinds of methods:

(1) The method of determining the key, or most vital problem in any line of work.

(2) The method of organizing a plan to establish a new practice.

(3) A teaching plan to stimulate the desire in people to put the practice into effect.

No radical change was made during the year in any one of these, but there was a steady growth toward more efficient methods in all of them. Perhaps the slowness of growth indicates permanency or stability.

The application of the first method, that of determining the most vital problem to be attacked, showed a gradual change. Instead of being projected in general terms from the classroom to the community, the problem was determined from a study of local conditions in a community, a township, or a part of a county. Facts about a locality obtained from the assessment rolls, from local surveys, and from the general judgment of the leading farmers or home makers, helped extension workers to apply the teachings of the college of agriculture, or became the reason for their making no application in a particular locality of what was generally taught elsewhere. Such methods of determining an agricultural problem were carried on in some degree in Arkansas, South Dakota, New York, and Maine. In home economics this method was used in North Dakota, Ohio, Utah, Mississippi, Massachusetts, and Maine. In a few States another method, that of setting up standards in the home and on the farm, was used by many of the State specialists. This process brought people to a realization of the major and minor needs of the home and the farm and revealed many defects in the appraisal or evaluation of different features of home and farm expenditures. This method of holding conferences among farm people was employed in Montana, Wyoming, Colorado, Maryland, and Vermont.

The method of organizing a plan to establish a new practice gave larger development to local leadership, more especially in home economics than in agriculture. Local leadership was also developed in the 4-H club work. Plans for giving the leaders more instruction in subject-matter and in methods of carrying their work to their home groups were given attention in practically the entire country.

An additional advantage in this improved method of organizing a plan to establish a new practice was the increased cooperation of the extension specialists at the colleges. The farm-management cost-accounting work in California brought together the extension horticulturists, the extension dairymen, and the farm-management specialists. In Mississippi there was a united effort on the part of the extension horticulturists and the nutrition workers to provide a better diet in rural homes. In Kansas the extension agronomist, the marketing specialist, the entomologist, and the extension plant pathologist worked together to one end, that wheat might be produced more economically. In Virginia, North Carolina, and Maryland the production of early potatoes was carried on somewhat more successfully than in previous years, as a result of the bringing together of the large producers, the agronomists, horticulturists, and marketing specialists of the State extension service.

The various specialists gave an increasing amount of their time to 4-H club work. This work often led to the changed practices of adults. A closer cooperation was brought about between the extension information or publicity force and the subject-matter workers. There was also a growing understanding and an increasing consideration of the agencies of business through which improved practices could be brought to the attention of a greater number of people than could easily be reached through extension forces alone.

The improvement in extension teaching was as gradual as that in other phases of work. Two phases, however, stood out rather prominently: (1) The simplification of a demonstration and the adaptation of subject-matter to a greater number of people and (2) th

increased use of a variety of human agencies through which improved practices are taught and the use of a greater variety of means to call attention to and quicken the interest of people in a new practice. The attention that was given to "How to make a talk," "How to write a circular letter," "How to make a radio talk," and "How to improve exhibits" was indicative of a constant improvement. The most outstanding indication of improvement in actual extension teaching methods was observed in the annual State conferences, the regional conferences, and other special occasions in which the programs provided for the discussion of the learning process, or the responses that people make because of their likes and dislikes, their desires, attitudes, prejudices, and wants. These subjective features were discussed more effectively and with particular reference to their adaptation to extension teaching.

In the Eastern States conference and the Western States conference considerable time was given to methods of extension teaching. In the States conferences in Mississippi, Arkansas, California, Nevada, Wyoming, Montana, Connecticut, Nebraska, Michigan, and a few other States a place in the program was reserved for the discussion of subjects connected with teaching. Books on human behavior, salesmanship, and psychology were added to the State extension libraries and county extension agent's libraries.

The outlook for continued emphasis on teaching methods was very bright because of the frequent expressed desire on the part of specialists and State leaders for work of this nature. These workers found that presenting facts to people is not enough, that a desire for the facts must be created.

INFORMATION AND VISUAL INSTRUCTION

Extension publications in 1929 were characterized by improvement in the presentation of subject matter, the more liberal use of appropriate illustrations, and a trend toward brevity and more attractive make-up. There were 6,345,488 publications distributed by county extension agents during the year.

During the year, the State extension divisions published in the interest of extension work 1,709 printed documents consisting of 242 bulletins, 366 circulars, and 1,101 miscellaneous publications. The Office of Cooperative Extension Work prepared and printed reports on cooperative extension work for the years 1926 and 1927 and 11 department circulars relating to phases of extension activities and teaching methods found to be successful by extension agents. The office contributed 23 mimeographed circulars to the extension service series of circulars and issued 221 miscellaneous duplicated publications on various extension subjects.

NEWS SERVICE

In the development of news service in relation to extension work increased interest was shown in aiding county extension agents to improve their news service to local newspapers. A study made by the committee on relations between the extension editor and the county extension agent of the American Association of Agricultural Editors indicates that the instruction to agents in handling extension news for the local press is regarded by the editors themselves as a

definite part of their work. It was found by the committee that county extension agents who had taken journalism in college were equipped to handle the news service more satisfactorily than those who had not had such training. It was also found that the most effective work was being done through personal visits to the county and through meetings with small groups of agents in district conferences. Efforts to give instruction in news writing at State conferences were not regarded as producing effective results beyond arousing some interest and enthusiasm on the part of agents within their counties. As a result of a study, the opinion of the committee, expressed in its report at the annual meeting of the association in Durham, N. H., in July, was that instruction in handling news must be given to the agents largely by the extension editors, and that the supervisors and specialists were chiefly helpful in this field through their moral support of the effort and the encouragement they might give the agents to develop this phase of their activity. The report of the committee indicates that news-writing bulletins were of little value unless used to supplement actual instruction by the extension editor. News-writing contests were favorably reported on, and encouragement was given to their continuance and their extension to States other than those then conducting them. County extension agents reported preparing 423,600 news stories for the press during 1929.

A record of the total number of news articles prepared by State extension divisions is not available. In making available material on extension work for press use from a national standpoint, the Office of Cooperative Extension Work cooperated with the Press Service in assembling and preparing 63 articles for the Official Record and for press release.

VISUAL INSTRUCTION

Cooperative field work between the department Office of Cooperative Extension Work and the States was developed further along the lines of taking series of photographs covering organized subject matter. After this type of work had been done in Maryland and Virginia in 1928, similar work was done in four States—Virginia, Maryland, Texas, and North Carolina—in 1929. In North Carolina series of photographs were taken on feeding hogs, dairying, and cheese making. A desire for photographs on the part of the State extension divisions was evident during the year as both extension editors and county extension agents were frequently handicapped in their efforts to give this material wide distribution because of the lack of suitable photographs for the purpose. Exhibits were used widely by extension agents at county, State, and interstate fairs. More stress was placed on the preparation of exhibits that would definitely present extension activities and appropriate subject matter. More general use was made of demonstrations and other methods of bringing action or motion into such exhibits. The department Office of Exhibits cooperated with the Office of Cooperative Extension Work and the State extension divisions in the presentation of various exhibits covering extension activities, particularly those relating to 4-H club work. The Office of Exhibits also cooperated in the preparation of the 4-H club exhibits at the Eastern States Exposition, at Springfield, Mass.

Lantern slides and film strips were reported as having been used by county extension agents at 7,747 meetings. There was marked

increase in the use of film strips during the year. The total purchases of copies of film strips by agents through the Office of Cooperative Extension Work amounted to 1,864. The arrangement whereby the department contract with a commercial firm for the making of film-strip negatives and prints is made available to State divisions, was continued. Shipments of 1,906 department motion pictures were made to county extension agents during 1929. The number of extension meetings at which motion pictures were shown was 19,117 during the year. The department produced 23 new motion pictures covering the following subjects: Cooperative marketing, forestry, health, animal husbandry, soils, control of predatory animals, meats, plant industry, control of insects, roads, 4-H boys' and girls' club work,

home management, poultry, and other agricultural and home-economic subjects.

In connection with the visual service which is rendered to the field, the Office of Cooperative Extension Work in 1929 cooperated with State extension divisions in taking a total of 2,133 field and 389 laboratory photographs. Eleven States were visited by the personnel of the visual instruction and editorial division of the office for the purpose of giving instruction at extension conferences in methods of extension photography and the use of visual aids. More than 57,869 prints, slides, enlargements, charts, posters, and drawings were requested and prepared for use in extension work



FIGURE 2.—4-H club girl broadcasting

through the Office of Cooperative Extension Work. There were 10 new lantern-slide series and 12 film-strip series prepared for extension use and 1 lantern-slide series and 1 film-strip series previously prepared were revised.

RADIO

Preliminary steps were taken during the year by the department to correlate Federal and State extension broadcasting in cooperation with commercial stations. One step was the introduction of a monthly 4-H club program into the National Farm and Home Hour program through a network of 45 stations associated with the National Broadcasting Co. This national 4-H club program was presented on the first Saturday of each month. It began August 3, 1929. In the typical program there appeared a club boy and girl

(fig. 2), each from a different State, an extension agent or local leader from one of the two States represented by the club members, and a representative of the department extension service. The talks were interspersed with musical selections. From August to December, inclusive, eight States were represented in these programs, as follows: Maryland, Connecticut, North Carolina, New Jersey, Iowa, Illinois, Virginia, and Indiana.

Another 4-H club radio feature of the year was the national 4-H club banquet broadcast over a nation-wide hook-up from the Third National Boys' and Girls' Club Camp in Washington on the night of Saturday, June 22. The principal speaker of the evening was Mrs. Herbert Hoover. This broadcast was widely received, and in many sections of the country local groups of club members assembled to listen to the broadcast.

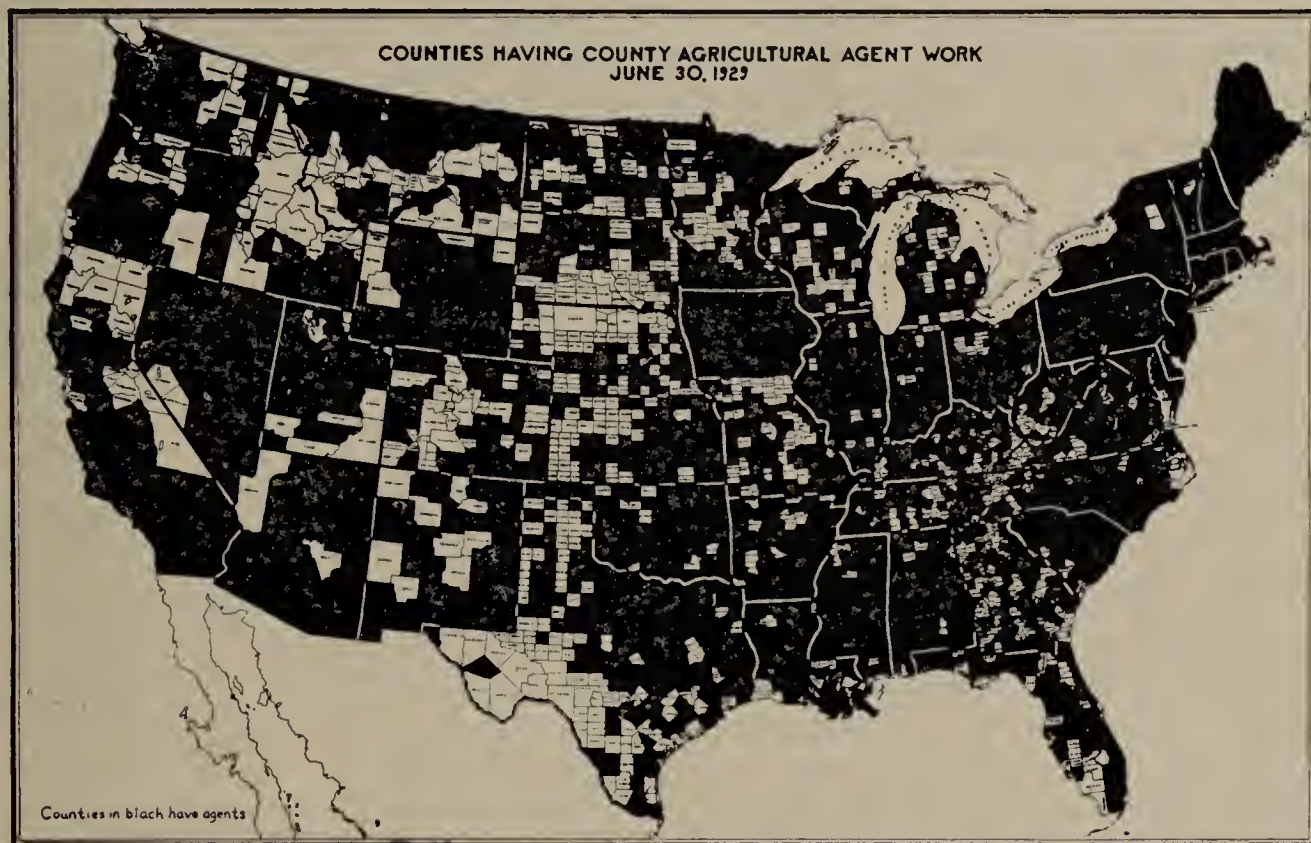


FIGURE 3.—Map showing distribution of county agricultural agents

Aside from these 4-H club programs the aim eventually is to share all time available to the department on commercial stations with the individual State extension services so that both national and local information programs may go out by radio at one period.

COUNTY AGRICULTURAL AGENT WORK

County agricultural agents continued to assist farmers to get larger net returns per acre and per head of livestock and to train rural leaders to help give those engaged in agriculture the same economic and social advantages enjoyed by those engaged in other industries. As heretofore, emphasis was placed on reducing the cost of production as one means of increasing net returns. (Fig. 3.)

Cooperative marketing, agricultural-outlook conferences, and an increased study of statistics and economic facts as a basis for county extension program planning received increased emphasis during 1929, partly because of the passage of the agricultural-marketing act.

More than one-fourth of the 2,000,000 farmers in this country who were members of cooperative-marketing associations in 1929, belonged to one or more of the 3,452 cooperative-marketing associations

organized with the help of county agents. The total sales and purchases of all associations organized with the help of county agents were more than \$270,000,000 in 1929, which was \$40,000,000 more than in 1928, and the total saving or profit to members was conservatively estimated at more than \$20,000,000, as compared with \$14,000,000 in 1928.

MARKETING FARM PRODUCTS COOPERATIVELY

Each of the standard marketing associations in Minnesota is primarily the result of a carefully planned extension program. County agents as well as extension specialists and supervisors have cooperated in furnishing information and suggestions from time to time to these associations and in giving assistance in arranging for and conducting local meetings. Special assistance was given to livestock-shipping associations in improving the service of the associations and meeting the changing conditions in livestock marketing. In some counties, such as Traverse County, Minn., farmers could market practically all of their commodities if they desired through some local cooperative organization.

The Montana county agents have assisted by giving information to turkey-marketing associations since 1922, when 26 members pooled 2 carloads of turkeys cooperatively. In 1929, 3,196 members sold 55 carloads, valued at \$416,382. This amount is approximately \$80,000 more than the producers could have obtained through local marketing channels.

County Agent Martin of Marshall County, Okla., called together the leading turkey raisers of the county to discuss the organization of a marketing association. As a result of this meeting an association was organized, and the turkeys were pooled for market. The associations sold 7,000 turkeys in the Thanksgiving pool and approximately 6,000 in the Christmas pool. The Thanksgiving pool brought 3½ cents per pound above the local market price.

The county agent in Randolph County, Ala., reported that four cooperative live-poultry cars were used in the county, which resulted in more than \$10,000 worth of live poultry being shipped cooperatively. When the first car of the season came through, net returns to farmers at one local shipping point were 22 cents per pound for hens, when only 16 cents per pound was being paid by local buyers. There was a net gain of 6 cents per pound to the farmers.

In Oconee County, S. C., during the year, 11 carloads of live poultry were sold cooperatively for an average of 3½ cents per pound more than the same quantity of poultry would have sold for through other available markets. In this case, 29 days of the county agent's time in helping to arrange for these sales brought about an increased net return to the farmers of the county of more than \$5,600.

In Pulaski County, Ark., the establishment of the farmers' retail market about 1923 and its successful operation since that time constitute the largest and possibly the best single piece of agricultural extension work ever done in the county. In 1929, this market, which had become popular with both producers and consumers, covered six city blocks. It included permanent sheds, a glassed-in meat market, and other up-to-date equipment. Funds for operating the market were derived from a fee of 25 cents a day collected from each seller.

During the year, 950 different farmers used the market for selling surplus produce. More than 11,000 loads of farm produce were sold. The total attendance during the 156 market days was about 275,000 customers. After a careful check-up, the year's sales were estimated at about \$250,000.

PRODUCTION AND PRICE TRENDS STUDIED WITH FARMERS

In order to help farmers adjust their production to avoid surpluses which tend to depress farm prices, county agents conducted agricultural outlook meetings and program-building meetings at which careful analysis was made of available information relating to production and price trends. More than 25,000 farmers cooperated with the



FIGURE 4.—Group of farmers studying outlook report with county agricultural agent.

county agents in keeping detailed farm accounts, and more than 20,000 farmers cooperated with the agents in keeping records of cost of production.

A relatively large number of counties in every section of the country developed agricultural programs based on census and other economic data including farm accounts, surveys, and other records, so as to give farmers maximum help in increasing their net income. There was a considerable increase during the year both in the interest among farm people in the forecasts and their confidence in outlook reports.

MORE LEGUMES AND LARGER YIELDS INCREASE CROP PROFITS

Increased legume acreage, improved varieties, and seed certification received major emphasis in the growing of farm crops. The number of farmers who plowed under cover crops or green manures upon the

recommendation of county agents was increased from 38,577 in 1928 to 51,307 in 1929.

FARMERS CONVINCED OF IMPORTANCE OF USING LIME

Fifteen years ago many farmers were skeptical about the value of using ground limestone for increasing the stand, yield, and longevity of legumes. During 1929 more than 350,000 farmers cooperated with county agents in demonstrations or otherwise adopted improved practices with reference to soil improvement. The use of lime was taken up by county agents in every section of the country that needed it,

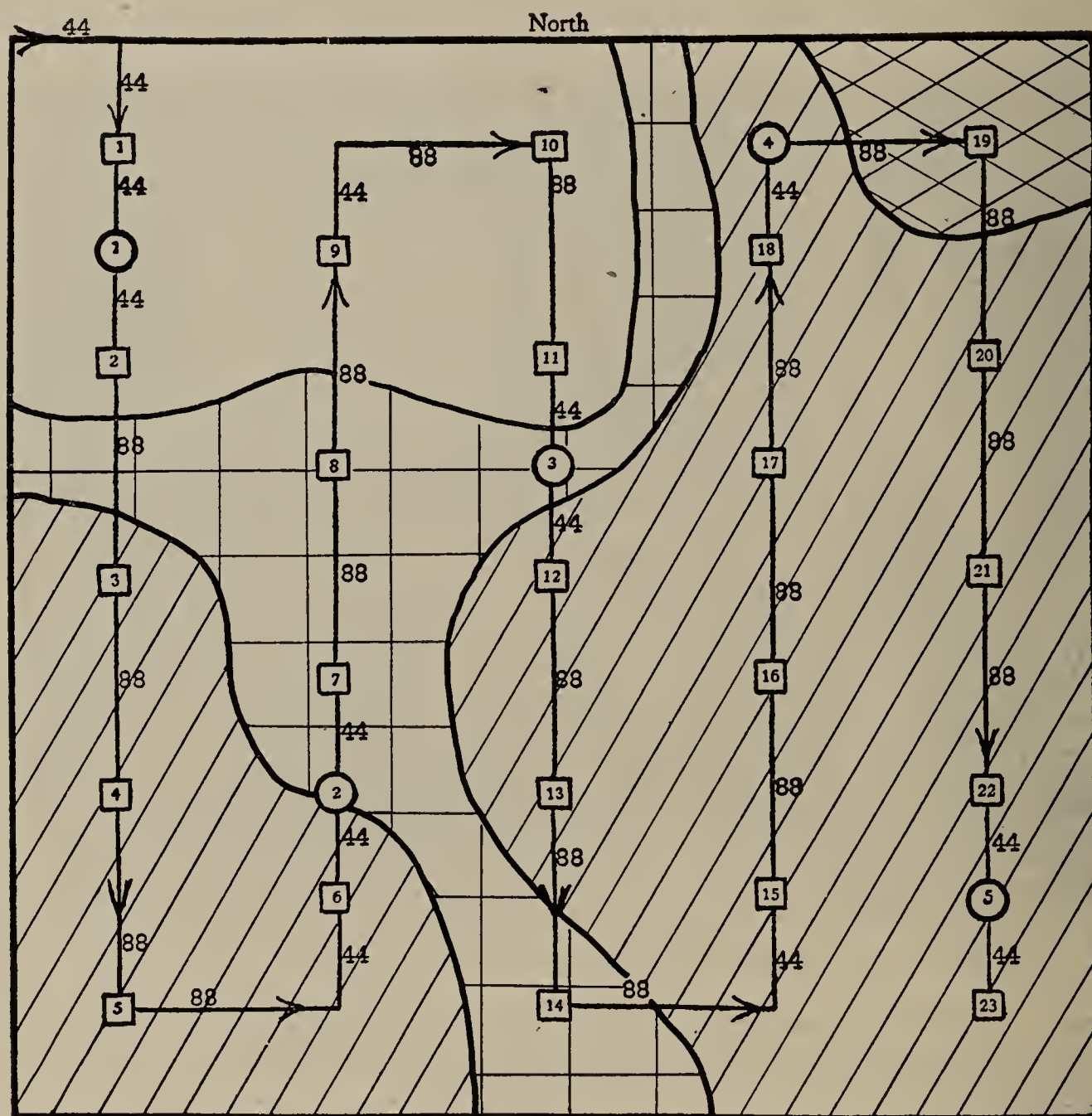


FIGURE 5.—Chart showing a 40-acre field in which a county agent gathered soil samples. Squares represent 23 locations where the surface soil samples were taken; the circles, where the samples of subsurface soil and subsoil were taken; the numbers 44 and 88 represent distance in feet. The diagonal lines, squares, and diamonds represent the degree of acidity in different areas

and the need for it and the results of using it were no longer questioned by farmers in most sections, nor was its use regarded as an experiment. Farmers usually brought in samples of soil and consulted the county agent regarding the correct amount of lime to use.

The systematic plan of testing soils, as outlined and carried out in Illinois, for example, increased the interest of farmers in soil treatment and made it possible for the county agent to assist many more farmers in this work. The plan for soil testing, as shown in Figure

5, is drawn up to represent a 40-acre field. Following this plan samples of surface soil were taken from 23 locations at a depth of 1 to 6½ inches, subsurface soil from 5 locations at a depth of 6½ to 15 inches, and subsoil from the same 5 locations at a depth of 16 to 30 inches, making a total of 33 samples for the 40-acre field.

One county agent reported the testing and mapping of 11,000 acres in 19 half-day meetings. Project leaders were trained in this way to assist in carrying out soil-management programs on a county-wide basis. The new test for available phosphorus, which had been perfected by the Illinois agronomy department, was used in a number of counties for the first time. Two counties reported 10,000 acres each that were tested and mapped for available phosphorus, and several county agents tested soil on 200 to 4,000 acres.

The county agent in Grant County, Wis., assisted in having samples tested from 100 limestone quarries in the county. Thirty-six limestone pulverizers crushed more than 30,000 tons of limestone during the year in the county. The farmers in Portage County, Wis., excavated 24,500 tons of marl during the year.

The county agent in Washington County, Tenn., encouraged the farmers of his county to use less lime per acre and to lime more acres. As a result of his efforts the farmers ordered a trainload of 30 carloads of lime in one shipment.

IMPROVED VARIETIES INCREASE NET RETURNS

County agents are frequently asked what variety of a particular crop will produce the largest yield, meet the market demand, and bring the best price. Farmers are also interested in getting disease-resistant and certified seed varieties for the same reason.

In 1914, when county agent work was being started in Montana, little was known concerning Marquis wheat, a new spring variety which had been developed in Canada. Tests were used to determine how well it would yield under Montana conditions. Its desirability for Montana conditions was emphasized by the county agents from 1915 to 1917. By the close of 1917 most of the farmers in the State were using this improved variety of spring wheat. A similar change occurred in winter wheat, with the introduction of Montana No. 36 in 1915. The extension forces, through county agents, demonstrated that this variety would yield from 3 to 5 bushels more than other varieties, and in a relatively short time the winter-wheat-producing areas in the State changed from Turkey to the Montana No. 36 variety. The county agent in Daniels County reported the increased use of pure Marquis seed wheat and the results as follows: "The number of growers of pure Marquis seed has increased from 1 in 1922 to more than 500 in 1929. The average increased yield over other varieties has been 3 bushels per acre."

As a result of six years of seed-corn type selection encouraged by county agricultural agents, practically every seed-corn grower in Kansas modified his type of seed. It is estimated that the use of improved types of seed-corn in Kansas increased the yield 3 bushels per acre; seed-corn testing increased the yield 2 bushels per acre; and the use of improved varieties brought an increase of 3 bushels per acre. Farmers are beginning to realize that it pays to use as well as to produce certified seed.

HEAVY LOSSES FROM BOLL WEEVIL PREVENTED

The outstanding insect-pest control work carried on was the reduction of losses from cotton-boll weevil through the use of calcium arsenate dust recommended by county agents. The number of demonstrations relating to the growing of cotton was increased from 19,071 in 1928 to 26,178 in 1929. The number of farmers who sprayed or dusted cotton upon the recommendation of county agents primarily for the control of boll weevil was increased from 10,970 in 1928 to 24,544 in 1929.

The county agent in Chester County, S. C., reported that 92 farmers called at his office with reference to boll-weevil control and he made 97 visits to farms in connection with this problem. These activities and other efforts resulted in 300 barrels of blackstrap molasses and 194,000 pounds of calcium arsenate being purchased for weevil control. This agent sent out questionnaires to 550 farmers, 85 of whom reported that they used poison for weevil control. Nearly half of these used poison for the first time. Several of these farmers reported the production of one-third or one-half more cotton per acre where poison was used.

Table 9 gives a report of the Alabama boll-weevil control demonstrations, 1925 to 1929.

TABLE 9.—*Demonstrations of boll-weevil control in Alabama, 1925 to 1929*

Year	Number of counties having demon-strations	Total acreage in demon-strations	Net profit from the poisoning of cotton in demon-stration
1925.....	6	30	\$612
1926.....	4	850	8,500
1927.....	17	2,604	31,221
1928.....	23	10,420	126,498
1929.....	29	34,021	837,597

County Agent Heath, of Chambers County, Ala., reported 22 boll-weevil control demonstrations involving 528 acres of cotton. The use of poison dust in these demonstrations resulted in an average increased yield of 366 pounds of seed cotton per acre. Besides the 22 farmers conducting the demonstrations, 75 other farmers did some poisoning. One farmer who poisoned 70 acres obtained an average yield of 1,000 pounds of seed cotton per acre, a total increase of 45,500 pounds. The yield on unpoisoned cotton was 350 pounds per acre.

Twelve carloads of calcium arsenate were used in Rapides Parish, La., in controlling the boll weevil on the cotton crop during the year on a total of 12,000 acres. Agents in two Louisiana counties reported that more than 90 per cent of the farmers dusted with poison to control cotton-boll weevil. Many of the other agents in that State reported that 50 per cent of the farmers were using the same remedy.

In Hoke County, N. C., 1 acre of cotton that received six dustings of 5 pounds each, at a cost of \$2.10 per acre for materials, produced 1,310 pounds of seed cotton, and the remainder of the field of 6 acres that was not dusted averaged 840 pounds an acre.

HORTICULTURE AND BEAUTIFICATION OF HOME GROUNDS

Early setting of tomato plants was found to be an important recommendation for obtaining high yields in New Jersey. The vegetable-gardening specialist and county agents demonstrated that stocky home-grown plants, planted May 5 to 15, almost invariably showed increases of from 2 to 4 tons per acre over those planted June 1 and later. Records of one company selling plants to farmers in New Jersey showed that in 1926, of the 20,000,000 plants sold, 12,000,000 were set in May and 8,000,000 in June. In 1929, this same company sold 34,400,000 plants, 29,460,000 of which were set in May and 4,946,000 in June; or, in other words, out of a total of about 14,500 acres, 11,800 acres were set in May and only 2,700 acres were set in June. At \$18 a ton this change brought over \$400,000 increased income to these tomato growers. It took no more plants, no more fertilizer, no increased cost to grow the crop; the only extra cost to the farmer was the cost of harvesting the increased tonnage and carting it to market.

The agent in Gillespie County, Tex., reported that the first pecan trees were budded to papershelled varieties in his county about 1917. About 1924 an active campaign was carried on, and in 1929 nearly every community had improved pecans. Each year more trees are top-worked, and the average price obtained for improved nuts is about three times that obtained for native nuts. San Saba County, Tex., reported that one demonstrator gathered 6,000 pounds of improved nuts from his grove, which he had top-worked for 12 years. These nuts were sold at 35 to 50 cents per pound, while native nuts like those formerly produced by the same grove sold at 10 to 14 cents. The production in pounds was increased at least 25 per cent, as the result of budding with improved varieties.

The agent in Linn County, Mo., reported that 300 rural-school children and 600 adults were spurred on to action in the beautification of home grounds by 18 community leaders and 10 days' activity of the county agent. Among the improvements made were the following: 111 houses were painted; 560 buildings were painted the same color as the house; 480 new fences were built on 212 farms; 155 yards were cleaned of rubbish, and 104 yards were seeded; on 120 farms fences were made to keep out poultry from around the house; on 320 farms shrubs were planted around the house; on 168 farms flowers and shrubs were planted along the borders; on 68 farms unsightly objects were screened; and on 160 farms shade trees were planted. (Fig. 6.) This project was started in February with a contest between rural-school teachers and another contest between rural-school pupils. Teachers competed in making plans for the beautification of school grounds, and pupils competed in planning beautification of home grounds. The winner of first prize among the pupils received national publicity for making plans to beautify the General Pershing homestead.

The South Dakota county agents and the home demonstration agents cooperated with the horticultural specialist in carrying on a project for beautification of home grounds. Of the 9,352 people who attended meetings in 40 counties, 1,208 adopted some of the recommendations made relating to beautification of home grounds.

The county agent in Green County, Ala., reported that as the result of a suggestion to the county commissioners in the fall of 1927 that they sow the courthouse lawn with ryegrass, 50 people bought 1,800 pounds of ryegrass for sowing lawns in 1928, and 75 people ordered 2,500 pounds of ryegrass for sowing lawns in 1929. The beautification of lawns resulted later in the setting out of shrubbery for beautifying home grounds.



FIGURE 6.—A home planting made under direction of an extension agent

TREE PLANTING CONTINUED

Sixty-one woodland owners in York County, Me., have planted 128,500 forest trees on demonstration areas since 1924, when the county agricultural agent there gave the first demonstration in planting forest trees. From 1924 to 1929, 42 forest-tree planting demonstrations were given in the county. In 1929 there were only 3 of the 28 townships in the county in which there was not at least one demonstration forest plantation. Although the total number of forest trees planted in the county has never been carefully determined, it is known to exceed 400,000, mostly white pine.

The Nebraska Extension Service distributed 701,000 forest-tree seedlings and transplants in April, 1929, to 2,600 farmers for planting windbreaks, wood lots, and shelter belts on farms.

In Guernsey County, Ohio, the agent sent a series of three circular letters to a mailing list of about 1,500 people, calling attention to the need of reforesting the hills and waste lands of the county. As a result 60,000 trees were distributed, whereas in 1928, only about 2,000 trees were planted.

BETTER SIRES AND MORE PROFITABLE COWS

The replacing of scrub sires with registered sires bred from a high-producing line and the elimination of unprofitable cows received major attention from county agents in livestock projects during 1929. In all, 19,575 farmers were assisted in obtaining purebred dairy sires. The number of dairy-herd-improvement associations organized or reorganized with the assistance of county agents was increased from 1,314 in 1928 to 1,496 in 1929. The influence of these associations in bringing about the adoption of approved dairy practices was brought out in a Michigan report which showed that the average production of the 25,455 cows tested in Michigan dairy-herd-improvement associations in 1929 was 320 pounds of butterfat and 8,009 pounds of milk. Ninety-two per cent of the 2,500 dairymen in these associations used purebred sires. These dairymen cut more than 500,000 acres of alfalfa in 1929 in comparison with 80,000 acres in



FIGURE 7.—County agricultural agent discussing purebred herd with farmer

1919. They had an average of at least one acre of alfalfa and one-half acre of sweetclover per cow. Seventy-five per cent of them fed balanced rations, and fed grain to cows in summer. A comparison of these averages with averages in any county indicates the influence of membership in herd-improvement associations. Of course, these results were partly due to the fact that the more progressive dairymen joined the association. (Fig. 7.)

Wisconsin had a total of 143 standard dairy-herd-improvement associations with more than 70,000 cows under test. Several of the Wisconsin county agents encouraged the system of the mail-order testing association, which brought 2,635 additional herds with more than 40,000 cows under test. A number of the mail-order associations had field men who served as dairy extension specialists.

California reported 2,074 members in dairy-herd-improvement associations, and 92,148 cows under test. A total of 12,098 of these cows, or 13 per cent, were culled as unprofitable.

One dairy-herd-improvement cooperator in Kansas reported that the average returns above feed cost were \$20.39 per cow the first year in the dairy-herd-improvement association, as compared with \$88.40 per cow the fifth year.

A purebred-sire campaign conducted in Grayson County, Va., resulted in the replacing of 48 scrub and grade beef bulls with purebred bulls. In another Virginia county, a similar campaign resulted in the placing of 81 registered sires, including 36 dairy bulls, 22 beef bulls, 13 rams, and 10 boars. A survey was conducted previous to the campaign, and prospects were indicated on the survey blank. These prospects were visited by the county agent and one of the campaign committee members. Meetings were held in the communities, for which the local committees did the advertising. More than 700 farmers attended six of these meetings. A bull sale, held at the county fairgrounds in June, resulted in the sale of 14 registered bulls.

South Carolina reported that three counties had completed their work of eliminating the last scrub dairy sire. Wasatch and Beaver Counties, Utah, also have replaced all scrub dairy sires with registered sires. In Wasatch County a livestock show, a program, and a dance marked the exit of the scrub. The last scrub was brought before a jury, tried, convicted after a hard-fought, interesting legal battle, shot by the sheriff, and mournfully hauled away to be buried. A local banker presented a \$50 check toward replacing the deceased scrub with a registered sire.

One Kansas cooperator reported that eight daughters from a proven sire produced an average of 476 pounds of butterfat. The eight dams of these cows had an average production of 367 pounds. Records showed a profit of \$54 per cow from the increased production, which could be attributed to the influence of the sire.

The county agent in Lawrence County, Miss., stated that the elimination of the cattle tick from the county had stimulated the interest of the farmers of this typical cotton county in the production of livestock. Eight carloads of high-production dairy cows had been distributed in the county.

SWINE SANITATION INCREASED PROFITS

The county agent in Marshall County, S. Dak., reported that 17 "grow thrifty pigs" demonstrators raised an average of 6.28 pigs per sow as compared with 4.7, the State average. The cooperators who followed from 5 to 7 of the practices recommended raised 7.1 pigs per litter. Those who followed 3 to 5 practices raised 5.9 pigs per litter, and those who followed from 1 to 3 practices raised 5.2 pigs per litter. One South Dakota demonstrator reported that, of 120 pigs farrowed in old hog lots in 1928, 40 were raised, as compared with 86 of 100 farrowed from 14 sows kept under sanitary conditions in 1929. In addition to raising 6.1 pigs per litter instead of 2.8 pigs, as under the old system, the demonstrator stated that the pigs were more thrifty, required less feed for gains made, and that they reached 200 pounds each in 30 days less time.

An agent in Howard County, Mo., reported that 430 different hog raisers out of 975 in the county had adopted some recommended hog practices during the year. Two hundred and four used better feed, and 161 followed the sanitation plan with 6,440 pigs. Two hundred

and forty-six used movable hog houses. Twenty-one delegates who assisted were given bronze medals by the Kiwanis Club for getting at least 15 per cent of the hog men in their district to enroll in the project. The delegates had a large part in making the second year of the campaign a success. They did much of the work in arranging for and advertising meetings in their schoolhouse. "Growing rations, clean grounds, mean more pigs, more pounds," was selected as the best slogan out of 75 submitted in the slogan contest. The author of the slogan was awarded a large self-feeder for hogs. The other winning slogans were, "With proper care and feed the best, thrifty pigs will do the rest," and "Keep worms away and pigs will pay." In 1925, only 9 men were reported as following the sanitation system; in 1928, 96; and in 1929, 161.

OTHER LIVESTOCK ACTIVITIES

The county agent in Kimble County, Tex., reported that during five months, 12,000 head of sheep and goats were wormed under his supervision. A treatment of bluestone and nicotine sulphate was used. This was a double treatment which rid animals of both stomach worms and tapeworms. The cost of material used amounted to 1.2 cents per head, as compared with a cost of 4 and 5 cents per head for commercial vermifuges.

A horse-breaking demonstration conducted by the livestock specialist in Wexford County, Mich., attracted 450 people, some driving as much as 45 miles to attend. This was the largest crowd which ever attended an extension meeting in the county. A western horse which had been unmanageable for more than a month while an attempt was being made to break it and a 5-year-old native horse which was a kicker and balky were used at the demonstration. Both horses were hitched to a wagon and driven during the meeting.

In Clinton County, Ind., a multiple-hitch campaign was conducted, and 185 farmers attended the nine demonstrations. Assistance was given to 25 different farmers in constructing or marking out 38 hitches. Fifty-six farmers made and used the hitches demonstrated.

The county agent in Humboldt County, Iowa, reported that 10 multiple-hitch demonstrations were conducted, with a total attendance of 1,340 people. One farmer in the county explained the working part of his multiple hitch to more than 40 farmers in his community during the year. During the fall plowing season, 17 men visited his farm within one week's time for information about making the hitch.

Four Montana county agents reported the culling of undesirable breeding animals from flocks of sheep. In this culling work, each fleece was weighed and graded at shearing time. The ewes shearing less than 6½ or 7 pounds were culled and sold. The number of sheep culled in this way in the four counties was 19,542.

POULTRY SANITATION REDUCED CHICK LOSSES

Marked progress was made in the control of poultry diseases and parasites through "grow healthy chicks" campaigns. Connecticut cooperators cut their losses down to an average of less than 7 per cent of their chicks. The home egg-laying contest records showed that the hens produced from these healthy chicks increased their egg production to an average of 160 per hen, an increase of 20 eggs per hen.

The agent in Chariton County, Mo., reported that 44 farmers cooperated in the "grow healthy chicks" work. They started with a total of 23,642 chicks and raised 20,284, or 89 per cent to the age of 8 weeks. One of these cooperators started March 26 with 800 White Leghorn chicks and raised 94 per cent of them. The pullets from this hatch began laying September 1. On October 1 these pullets were producing 185 eggs per day. By November 1 the flock had been culled to 361 pullets, which produced 5,484 eggs or 15 eggs per pullet for the month of November. Ten of the cooperators made an average profit of \$616 for the year, with an average flock of 264 hens and an average production of 156 eggs per hen for the year.

Seven hundred and fifty New Hampshire poultrymen signed up to place more than 1,000,000 chicks in the "grow healthy pullets" campaign in cooperation with the extension service. More than 500 farmers reported having followed the recommendations to use only clean houses, and only 19 of them failed to provide clean land. Eighty-nine failed to use covered hoppers, and only 66 failed to clean their houses every five days.

Where no sanitary practices were followed in growing chicks in Pennsylvania, the mortality was 29 per cent; where suggested sanitary practices were adopted in demonstration the loss was only 10 per cent.

In McCullough County, Tex., 32,000 turkeys were wormed in 39 method demonstrations. A thorough check-up revealed the fact that wormed turkeys averaged 3 pounds more per bird than those that were not wormed. Those both wormed and fed balanced rations averaged from 6 to 7 pounds more than the average of 22 cars of turkeys shipped. Turkeys wormed and run on clean range with grain feed averaged 3 pounds more per turkey, with a mortality of only 10 per cent. In many cases not more than 1 or 2 birds were lost from flocks of over 200.

Illinois reported 261 poultry-flock cooperators in 41 different counties. The average production of eggs per hen was 10 greater than in 1928. Forty-five of the cooperators who practiced poultry sanitation had a profit of \$1.59 per hen, while the other cooperators had an average profit of only 91 cents per hen.

The total number of farmers using improved feeding rations was increased from 60,195 in 1928 to 69,458 in 1929. Assistance in the control of poultry parasites was given to 54,763 farmers. The total number of different farmers assisted in adopting improved practices relating to poultry was increased from 180,351 in 1928 to 211,168 in 1929.

AGRICULTURAL AGENTS DEVOTED 25 PER CENT OF TIME TO 4-H CLUB WORK

One of the greatest achievements of county agricultural agents during 1929 was a 10 per cent increase in enrollment and completions of 4-H club members under their leadership. County agricultural agents carried on work with 25,555 4-H clubs in which more than a third of a million boys and girls were enrolled, nearly two-thirds being boys. (Fig. 8.) County agents cooperated in the appointment of special 4-H county club committees and the setting of definite goals for 4-H club enrollments and completions. The average amount of time of county agricultural agents devoted to 4-H club work was increased to more than 25 per cent. The number of 4-H club leader-training meetings or conferences conducted by county agricultural

agents in cooperation with 4-H club supervisors was increased from 7,069 in 1928 to 8,032 in 1929.

SEVENTY-FIVE VOLUNTEER LEADERS COOPERATED PER COUNTY

Ten thousand more volunteer leaders than in 1928, about half for junior and half for adult work, brought the total number of voluntary county, community, and local leaders assisting in forwarding the agricultural extension programs up to 174,408, or 75 per county, of which 39,733 assisted with 4-H club work.

Director Mumford, of Illinois, in his report, said: "The participation of more and more farmers as local leaders in definite project work is increasing and thereby increasing the effectiveness of extension work."



FIGURE 8.— County agricultural agent and club members studying pecans

There was an increase in the use of county agricultural committees, consisting of a county commissioner as an ex officio member, a prominent banker or other business man, four or five leading farmers, and two or three women primarily interested in home and 4-H club project work. The county committees were known as county extension, agricultural, advisory, or executive committees. In some counties they were called county agricultural councils or farm boards

A Mississippi county agent said:

In every community where there was an organization, the chairmen of the committees located all demonstrations. The final reports were obtained by the chairmen and turned in by them at the end of the year. The best reports and the best 4-H club work came from organized communities of this kind. The best leaders of the county were developed in these communities. Ninety per cent of all calls for help on beautifying home grounds, a major project, came from these six communities of the county. The actual work required to meet the demands of the communities organized for extension work was less than one-half of that in unorganized communities.

Virginia used county advisory boards composed of outstanding farmers, leading business men, bankers, editors of local papers, members of boards of supervisors, Smith-Hughes teachers, women interested in the advancement of 4-H club and home-project work, and others interested in the advancement of agriculture. Nearly all of these advisory boards were divided into "project committees," according to members' peculiar fitness. County programs were developed by the county agent with the assistance of the advisory board.

St. Francis County, Mo., had a county dairy committee composed of nine members who met regularly and had practically full supervision over the dairy program in the county.

COUNTY AGENTS GIVEN VOTE OF CONFIDENCE

The increased confidence which farmers and business men have learned by experience to place in county agents was indicated in 1929 by the following:

An increase in the number of county appropriating bodies voting unanimously for appropriations to support county agent work; an increase in county appropriations and support by local people so that the counties and local people contributed 56 per cent of the salary and expenses of county agricultural agents; recognition of county agricultural agents as the local key men in handling all kinds of farm relief by the Federal Farm Board and other agencies; and the increased number of people adopting improved farm practices in each county.

A recent Tennessee law made it possible for any county in that State to employ a \$3,000 agent by providing \$600 toward his salary. The State would pay \$2,400. The fact that there were only two votes against the measure in both houses of the legislature was evidence of the confidence of the Tennessee people in extension work. A new California law provided that boards of supervisors of the respective counties might appropriate a sum not to exceed \$30,000 for any one year, for the support of county extension work in agriculture and home economics. A new Ohio law provided that \$3,000 per year might be appropriated by two-thirds vote of the county commissioners and any amount deemed necessary might be appropriated by a unanimous vote.

Among the States in which county commissioners made 3-year appropriations were Wyoming, Indiana, and Kentucky.

The vote of the members of the county boards of supervisors for county agent work in Michigan during 1929 was 1,477 in favor of the work and 101 supervisors against the work. Supervisors in 40 of the 66 counties voted unanimously for the extension appropriation. The vote of members of Wisconsin county boards in November, 1929, on county agent appropriations was 1,147 votes in favor of the work and 73, or less than 6 per cent, opposed. In 38 of the 55 Wisconsin counties the vote was unanimously in favor of the appropriation for county agent work.

NEWSPAPERS COOPERATED FULLY

Progressive newspaper editors in counties not having county agents usually took a leading part in pointing out the advantages of county agent work in neighboring counties, basing their comments on reports

of profitable demonstrations found in the exchanges which came to their desks. On account of the efficiency of the press in spreading information, county agents looked upon the local editors as their chief allies. The editors fully appreciated the value of the county agent's contributions to the paper and usually were glad to furnish all the space the county agent cared to use. Nearly all county and daily papers, in practically every issue, carried stories of county agent work and the results accomplished and frequently published editorials commending the work.

The editor of an Arkansas paper announced that the county agent column was one of the most popular columns in his paper. Another Arkansas editor stated that it could well afford to send a reporter on field trips about the county to write stories under the direction of the agent. Such stories were likely to be read carefully by the entire reading public. Still another Arkansas paper stated that the county agent material was invaluable because it gave local color to agricultural information.

HOME DEMONSTRATION WORK

PROGRESS

With a 17 per cent increase in personnel over the previous year, home demonstration work made notable progress in 1929. Farm families in 25,537 rural communities were influenced as a result of this work. A total of 246,846 changed practices having to do with home activities was reported.

With the help and guidance of extension agents and local leaders, farm women and girls carried on 1,112,262 demonstrations during the year. The greater share of these had to do with feeding and clothing farm families, improving and beautifying the farm home and grounds, and growing and marketing fruits and vegetables.

Many community demonstrations sponsored by the extension service were undertaken. These included the establishing of curb markets, the improvement of school grounds, beautifying of roadsides, and similar activities.

PERSONNEL

The total number of county home demonstration agents employed on June 30, 1929, was 1,292. (Fig. 9.) Of this number 125 were negro agents.

This force of resident agents was supervised and assisted by 135 State and district supervisors of home demonstration work and 191 specialists. There was an increase of 243 home demonstration agents over the number employed the previous year.

HOME DEMONSTRATION WORK IN THE TERRITORY OF HAWAII

One of the newest developments of interest during 1929 was the organization of home demonstration work in the Territory of Hawaii. Prior to 1929 an occasional group of women had been reached through talks or demonstrations conducted by members of the Federal experiment station. This general type of service received its first impetus during the war. With the establishment of the cooperative extension

service at the University of Hawaii has come organized home demonstration work similar to that in the States. The assistant director, and the four home demonstration agents in the counties of Honolulu, Hawaii, Maui, and Kaua have studied home conditions as they exist by making home visits, and at the same time have gained the confidence of the women.

The groups of women involved in the home demonstration work are of various races: Hawaiian, Japanese, Filipino, Chinese-Hawaiian, and others. Formal organization of groups was not attempted at first, but some groups have developed interest and activities to the extent of formally organizing with officers and project leaders. This development has come largely in Hawaii and Honolulu Counties.

ORGANIZATION

Although there was variety in the name and form of organization, the purpose of home demonstration work in all States was the same,

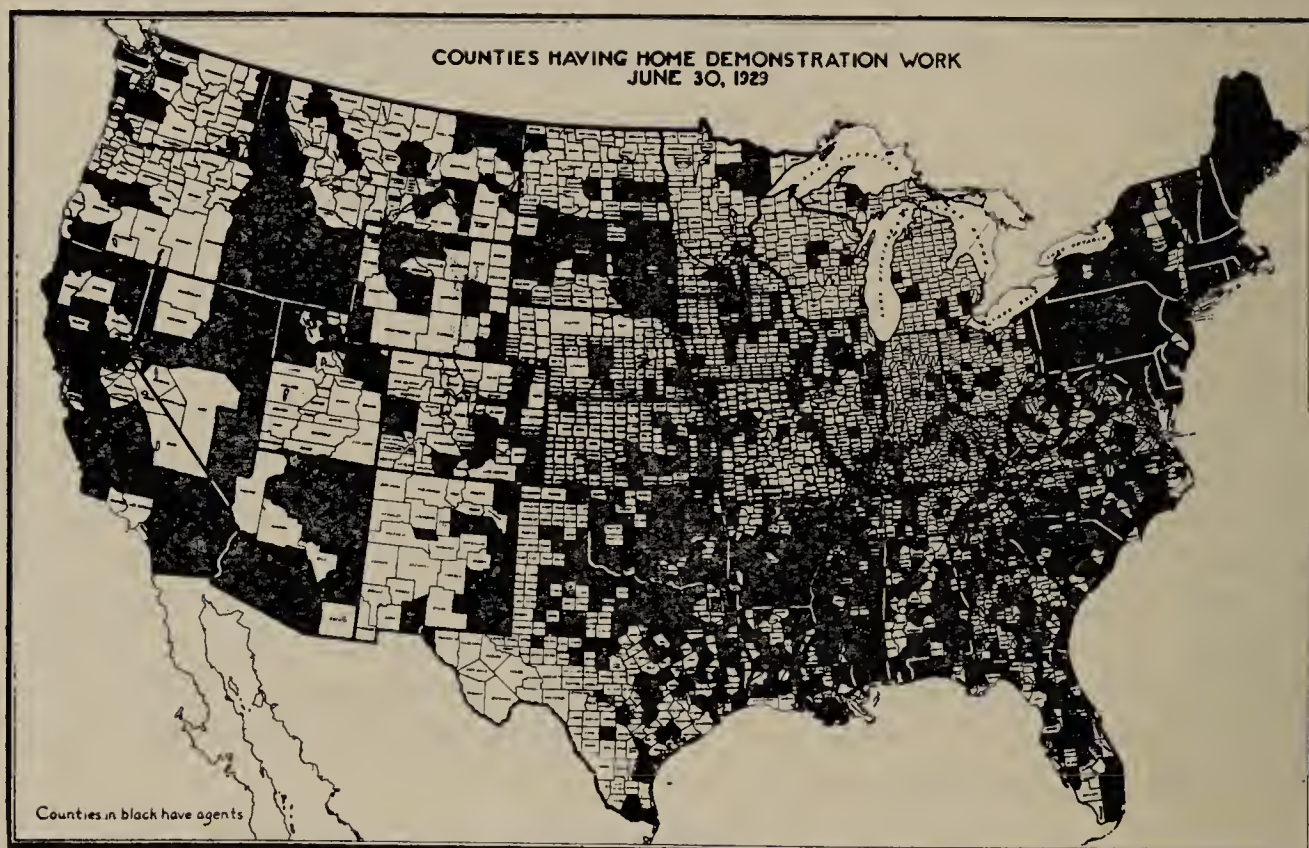


FIGURE 9.—Map showing distribution of county home demonstration agents

and this service contributed to the health, convenience, comfort, and beauty of the farm home in greater measure in 1929 than before. The unit of organization in the community continued to be the home demonstration club or group working with the home demonstration agent. In 1929 agents reported 22,759 such clubs carrying out definite programs of work. These well-defined groups were organized primarily to receive instruction, but more and more, in 1929, members took an active part in determining the local programs of work. County councils or advisory committees made up of representatives from local clubs worked with the home demonstration agent in considering problems and outlining programs. These councils grew in number and importance. They sponsor extension activities, offer constructive help, and assist definitely in carrying out the county program.

Oklahoma, whose home demonstration advisory committees are similar to those of several other States, reports this form of organization: The county home demonstration advisory committee shall be composed of—

- (1) Two delegates from each local home demonstration club who are regularly enrolled demonstrators.
- (2) Two delegates from each township in counties where there are no home demonstration clubs.
- (3) President and secretary of the federation of home demonstration clubs.
- (4) County health nurse.
- (5) County superintendent of schools.

In order to emphasize the importance of electing women who would give time and thought to the work, several Michigan counties formulated the following list of qualifications and duties of members of the home demonstration advisory boards, or county executive committees, as they are called in that State:

QUALIFICATIONS

- (1) Belief in the value of extension work.
- (2) Genuine interest in the activities carried on.
- (3) Past or present service as a local leader, and regularity as a member of a group.
- (4) Ability to attend executive committee meetings.
- (5) Ability to give time and thought to activities.
- (6) A good knowledge of the district.

DUTIES

- (1) To attend executive committee meetings.
- (2) To attend other district and county meetings at which help is needed.
- (3) To cooperate with the college in employment of the home demonstration agent.
- (4) To cooperate with the home demonstration agent in planning a program for the year based upon recommendations of local group members.
- (5) To cooperate with the home demonstration agent in working out plans for obtaining appropriations for the budget.
- (6) To cooperate with the home demonstration agent in supervising and promoting the organization and program in her district.
- (7) To attend at least the first local-leader training-center meeting.
- (8) To visit as many local groups as possible in her district.

Well-organized and working county councils or advisory committees enable the agents to reach more farm homes. They serve as a means of developing leadership among farm women—the kind of leadership that is farseeing. The farm women who are members of these committees see beyond the needs of their own homes and families to the needs of their community and county. They see in a larger way their responsibility and opportunities and contribute definitely to the development of the home demonstration program.

LOCAL LEADERSHIP

During 1929, 65,928 voluntary local leaders, serving without pay, assisted in forwarding home demonstration work throughout the country. These leaders were farm women elected by their local groups. They attended training schools to receive instruction which they passed on to other farm women; they acquainted people with extension work; they wrote news stories, giving publicity to extension activities; they checked up on results, and in various other ways supplemented the efforts of the paid extension worker.

In many home demonstration groups, the plan of organization includes, in addition to a president and a secretary, a leader in each project. The number of leaders by principal projects for women and girls in 1929 was as follows:

Food preservation and preparation.....	20,287
Nutrition.....	17,806
Clothing.....	23,922
Home management.....	10,279
House furnishing.....	11,583
Home health and sanitation.....	8,444

The general plan used throughout the country for training local project leaders is to hold a training school for one or two days at some central point. Leaders from the various clubs attend and are given instruction by the county home demonstration agent, a home-economics specialist, or by the State home demonstration leader. Later, they instruct their own group as they have been taught, coming back periodically for further training as the project progresses. The home demonstration leader of Michigan described their plan for leader training, which was typical, as follows:

The project leaders are deserving of all the credit which can be given them. They spend one day at the training class each month while the project is being carried and theoretically one day in teaching the lesson. As a matter of fact there are few leaders who do not spend more than the one day in giving the work to the group, as members are always wanting extra help. The two leaders from each group, particularly in counties where work on teaching methods has been given, are setting aside a definite time to get together to prepare the lesson. Two days and a half a month per leader would probably be a fair estimate of the amount of time spent on extension work. For most of these leaders it also means an expenditure of money for transportation to the training center and for lunch, either carried or bought. Many of the leaders come as far as 25 miles to the training centers. In some of the counties the expenses of the leaders are paid from the group treasury, the members contributing for this purpose. Despite the necessary expenditure of time and effort and money, the leaders feel it an honor to be chosen by their group members and think that they receive more than they give.

Through years of experience in training local leaders, home demonstration forces have established certain principles which make for successful quality of results obtained. Experience in many States has shown that leadership is more effective when leaders are elected by the group rather than when selected by the agent, or when chosen by a committee. Clubs that have been functioning for some time have learned the qualifications of a good leader and make better selections. Duties are explained to the leaders (fig. 10), and they undertake the job with a realization of what is expected. Experience has shown home demonstration workers that it is necessary to give leaders training in teaching methods as well as subject-matter information.

With this background of assured quality of instruction by local leaders, attention was directed in 1929 toward a greater spread of influence through local leadership.

The State leader in California reported the results of an effort along this line in that State as follows:

Since the main problem in each county is to influence the largest possible number of farm homes, the project neighborhood leader plan was tried with considerable success. The project leaders from different communities attended a training school where they were instructed by the home demonstration agent. Each project leader within seven days met with and trained four neighborhood leaders, each of whom gave the demonstration before three other farm women.

These three in turn met with two others and each of the two with one. In each step of the plan, effort was made to reach some women who had not been in regular attendance in the home demonstration or farm center groups. Sixteen counties used this plan at least once during the year in 141 centers, reaching 6,676 farm homes.

Many local leaders took the responsibility of arranging for attractive and instructive window displays in local stores where products concerned with extension projects were handled. (Fig. 11.) Visitors' days at project meetings were the means of bringing more women into contact with extension work. In a Kansas county, for instance, the nutrition-project leaders planned a series of such meetings. The slogan was: "Every member bring at least one guest on guest day."

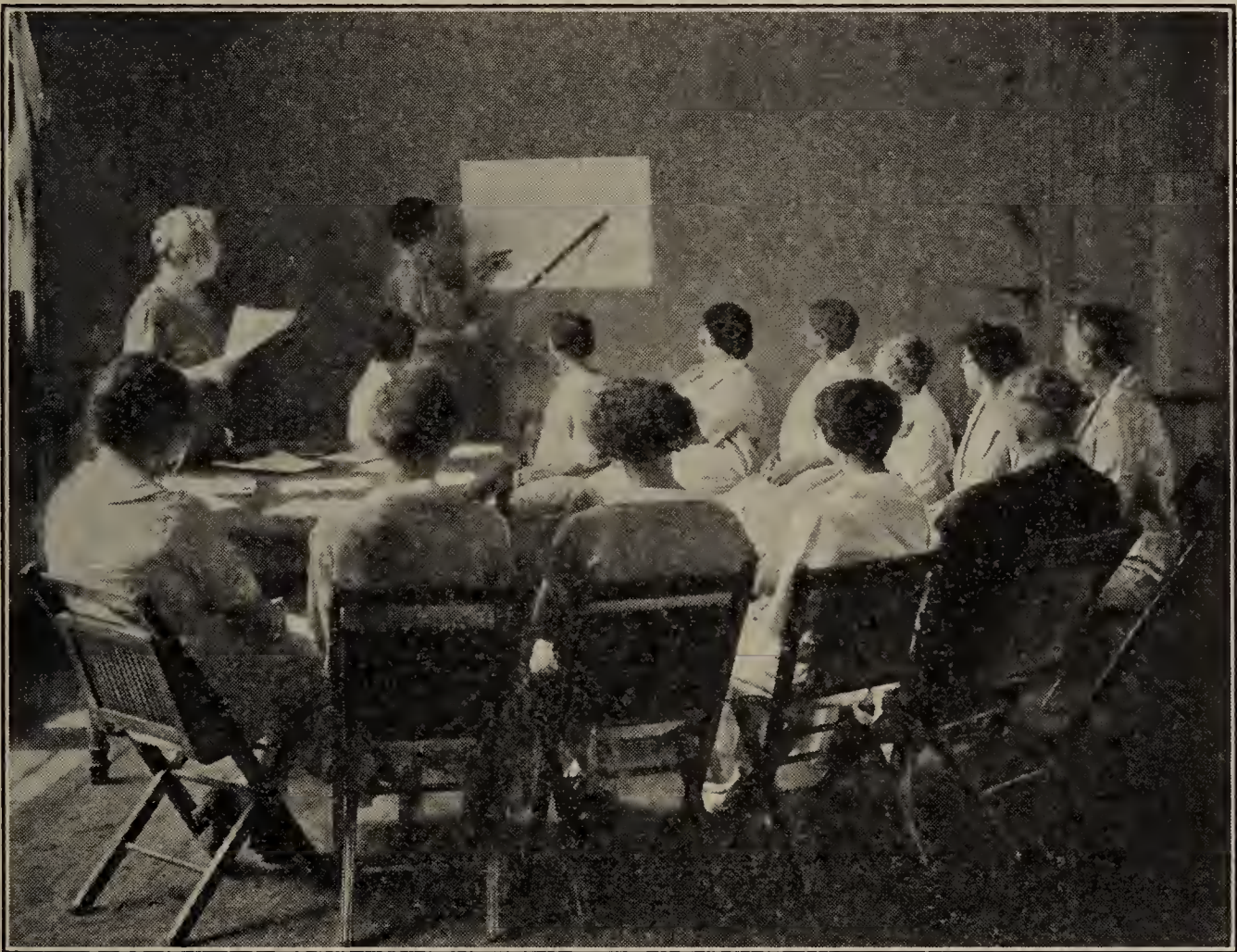


FIGURE 10.—Home demonstration agent explaining project work to local leaders

The meeting was usually held in a home where a demonstration kitchen or living room had been established, and part of the program consisted of showing improvements in this room to the guests. The various project leaders gave short, interesting talks, outlining the work accomplished in their projects, and presenting a forecast of work planned for the coming year. Roll call usually was answered by: "How extension work has helped me." These guest days resulted in substantial increase in membership in home demonstration clubs.

PROGRAMS OF WORK

During 1929 well-organized efforts to determine more fundamental programs of work were under way in many States. In an attempt to have programs develop locally, based on fundamental needs of the community, and not settle into a course of study or series of lessons, in some States the supervisory workers and specialists on

every visit to the county made a business of analyzing programs and helping to develop them. There was a growing tendency to build programs for a period of two to five years.

Although it has always been the aim to have the extension program based on local needs, the home demonstration people in 1929 gave more thought and attention than ever before to finding out what the needs of the majority of farm women in any community really were. Studies and surveys were used more and more, and their results served as a guide in planning the extension program. The surveys included not only conditions in the home but data from doctors, dentists, grocers, druggists, and others which would indicate what the real problems are. What amount of money does the farm family have to spend for family living? is a question which was



FIGURE 11.—An attractive window exhibit designed by home demonstration and club agents

incorporated in many of these surveys. What sort of a standard of living do farm people want for themselves and what will it cost, are other questions which groups of farm people in all parts of the country considered at meetings sponsored by the extension service. Extension workers guided farm people in setting up desirable standards of living. In many counties this work centered around the farm and home-economics conference which had started in some of the western States and which served as a means for determining an extension program. The following plan used in Franklin County, Vt., as a method for determining a long-time county extension program was typical of this new development, which was used with variation in many States.

A farm and home economics conference was held in December, 1929. This meeting was the result of preparation for many months,

during which time surveys were made to determine farm-home conditions, size and type of farms, and income from farming. In the surveys which concerned the farm home, local leaders were trained to procure the information. Four training schools were held for leaders along the following lines: Food, clothing, home furnishings, and farm-home conditions, including the budget. At the conference 150 farm men and women came together for two days to discuss the findings revealed by these surveys. Facts such as these were presented for their consideration:

The average amount of money available for family living in farm homes in this county is \$825 a year.

36 per cent of the farm homes in this county do not have running water.

54 per cent of the farm homes in this county can less than 100 quarts of vegetables each year.

51 per cent of the homes in this county provide 1 quart of milk a day for each child.

50 per cent of the children have decayed teeth.

Working in committees, guided by extension specialists and agents, these representative farmers and home makers set up standards of living for farm families in their county. They made recommendations for size and type of farming business to produce the \$1,500 net income which farm women named as the cost for a minimum standard. Out of these recommendations will evolve a long-time farm and home program in Franklin County.

Faced by such findings as those described above, home demonstration agents, specialists, and supervisors, as well as the members of local advisory councils who are responsible for formulating the extension program, realized that their immediate concern was, "What shall be done to solve these problems?" rather than, "What projects has the extension service to offer this year?"

Aside from the value of developing a county program by this method, there is an inestimable value in the awakened interest and consequent cooperation of the group of farm people participating in this type of program-making conference.

TEACHING METHODS

Since most of the home demonstration work centered around community groups, instruction in the form of lectures and demonstrations given at meetings was the type of teaching most widely used. During 1929 there were 120,895 women in attendance at meetings of this kind.

Many farm women to whom extension teaching would be most valuable were unable to leave home to attend group meetings. Each year an increasing effort is made to reach these women by the use of newspaper stories and circular letters. Many other women who had not become acquainted with extension work had their enthusiasm aroused through a contest, a tour, or a fashion show, and they were influenced by these means to make changes which resulted in more convenient homes with attractive surroundings, suitable and becoming clothing at less cost, and improved health due to wiser selection of food. For instance, in a group of Central States, approximately 200,000 women in organized groups reported improved practices in 1929, while an equal number of women in this area who are not members of home demonstration clubs reported making improvements, due indirectly to extension teaching.

Many people became acquainted with extension work by means of their local newspapers. Realizing that the expansion of the work depends on the knowledge and support of the people, home demonstration forces concentrated on a definite publicity program. Two distinct features of this program emphasized in 1929 were the publicity contest for extension workers and training local leaders in news writing.

In general, a friendly, cooperative attitude of the press toward extension work was maintained, and agents took greater advantage of this opportunity to put their work before the public. The publicity contest for extension agents was part of the program in a number of States and served as an excellent device to impress upon the home demonstration agent the value of publicity. Each agent in the contest submitted at the end of the year an exhibit of newspaper clippings, published photographs, and other material, usually in the form of a scrapbook. These were judged on the basis of quantity and quality. At first the agent was chiefly interested in the contest, but as time progressed she learned that the increased publicity resulted in increased effectiveness of her work. Louisiana reported an increase of almost 100 per cent in publicity for which home demonstration agents are responsible.

News-writing schools for local leaders proved another effective method of increasing publicity. In many States a series of 1-day schools was held in counties, where the extension editor was in charge and taught news writing to women who had been elected as publicity chairmen of their project groups. At these schools the women wrote news articles on assigned topics and received constructive criticism from their instructor. The local editor was often present and gave the women an idea of the kind of news story that was acceptable. The following results from a series of news-writing schools were reported from Michigan:

Articles are sent in more promptly, are better, and contain items of a wider range of interest. A larger percentage of those written appear in the paper. More attention is given to terminology and to clear explanation of the source of the project work being taught—hence a greater spread of influence.

Editors reveal a better understanding and give them cooperation, because the news stories are timely, interesting, and concern local people. One agent reported that five times as many articles are now appearing in the papers of the county as appeared formerly. That they are of better quality and are given better positions in the papers is also noted. Many more communities are using news stories preceding and following the articles. Some editors have cooperated to the extent of grouping the articles in a special column, which appears in the same position each week or month.

Agents and specialists have reported new groups enrolling for project work without any effort having been made to reach them other than through newspapers.

Reports for 1929 showed that in increasing numbers circular letters giving subject-matter information, many of them attractively illustrated, were being used. Many States maintained a regular service of this kind, sending circulars and letters containing timely information to a mailing list of women who were not members of organized groups.

Another method of reaching farm women was through home visits. Reports showed that 358,710 home visits were made by home demonstration agents in 1929. "Home visits with a purpose" was a slogan

used in one State in the belief that contacts made in this way were invaluable in home demonstration work.

Fashion shows, exhibits of various kinds, and tours to see improved kitchens and gardens were the means of introducing many farm women to extension work, providing an opportunity for them to see and learn improved methods of carrying on the multiplicity of activities connected with their occupation as home makers. Instruction given at camps and short courses was a source of help and inspiration to many farm women. In many of these programs some time was devoted to a study of parliamentary law and to the principles and duties of citizenship.

These programs included many features pertaining to the cultural environment of the home, such as a study and appreciation of music, books, pictures, birds, and flowers.

LEADING ACTIVITIES

FOODS AND NUTRITION

Selecting food in accordance with a standard for health and growth, preparing it so that it will be appetizing and palatable, and teaching her family the wisdom of a well-balanced diet, continued to be major interests of the farm home maker. The extension service helped her with these problems. The number of demonstrations in nutrition conducted in 1929 increased over those conducted in 1928 by 602.

Considerable progress was reported as a result of the effort to improve community meals. Extension agents found no better way of judging changed food habits than by observing the type of meals served at community gatherings where farm people eat together. By means of contests and campaigns, interest along this line had been stimulated for several years, and results in 1929 were noticeable. Salads of succulent vegetables and fruits were fast becoming the rule rather than the exception. Many covered dishes contained hot buttered or creamed vegetables which formerly contained starchy foods or pie. Milk was served to children at community meals, and fewer kinds of desserts were in evidence. Believing that the foundation for good nutrition consists of habits established in early childhood, the extension workers of many States, in their nutrition programs, concentrated on work with mothers of young children, with the result that in 28,710 homes improved practices in child feeding were carried out in 1929, an increase of 1,465 homes over 1928.

CLOTHING

How to dress herself and members of her family suitably and becomingly at low cost was a problem that faced many a farm woman. Home demonstration work helped to solve this problem by showing her how to select materials wisely, how to choose ready-made garments that fit and suit, and if she wished to sew, how to make dresses, undergarments, and hats for herself and the children. More farm women and girls learned how to care for clothing properly, how to do dry-cleaning at home, to remodel and renovate, thus adding years of life to many garments with a corresponding saving in dollars. It was reported that in 1929, 62,229 individuals improved practices in renovation and remodeling of clothing, 2,544 less than the number in 1928.

Also 119,636 individuals improved practices in selection and construction which was an increase of 14,556 over the previous year. That the farm woman was acquiring higher standards of clothing, and was choosing her clothes with greater discrimination, using her knowledge of line, color, and suitability to wearer, was obvious to any one who visited a home demonstration group. (Fig. 12.)

Many States in their clothing program emphasized clothing budgets. In the farm and home economic conference the committees on clothing worked out a clothing standard for farmers and their wives and children and estimated the cost. These detailed budgets, worked out by farm women themselves, were given publicity and stimulated considerable interest.



FIGURE 12.—County home demonstration agent showing how to take pattern measurements

Dress contests and fashion shows continued to be popular. In the junior work in several States attention was directed toward the matter of clothing for the farm boy. For instance, in Oklahoma a contest in appropriate clothing for 4-H club boys as well as for girls was conducted. Each county was allowed to enter four boy contestants to compete in the following groups: An appropriate outfit (1) for church and street, (2) for a formal party or dinner, (3) to be worn while milking, and (4) to be worn on the farm while at work.

More than 150 well-dressed boys represented their home counties in this contest, bearing witness to the fact that a project of this kind was of value.

HOME MANAGEMENT

Addition to labor-saving equipment in 49,760 farm homes during 1929 enabled the home makers to spend fewer hours doing housework

and allowed more time for other phases of home making. As a Kansas woman said about her made-over kitchen: "I now have more time to spend with my children, my flowers, and my friends." Home demonstration agents reported that 26,131 kitchens had been planned and rearranged for convenience during the year.

Labor-saving appliances which were added in greatest numbers to farm homes were 7,716 electric or gasoline irons, 7,420 kitchen cabinets, 6,531 pressure cookers, 6,180 kitchen sinks, 4,383 power washing machines, 2,528 iceless refrigerators, 2,087 power vacuum cleaners, 2,020 fireless cookers, and 1,854 hand washing machines.

Farm women displayed great interest in making a definite plan for expenditures having to do with family living. In 1929, 9,925 individuals made budgets and kept accounts for the first time.

IMPROVEMENT OF HOMES AND SURROUNDINGS

An achievement of importance in home demonstration work was the large number of farm homes which were made more beautiful both inside and outside. Thousands of girls entered the "own your own room" contest, which has been carried on for several years. The changes wrought in the girl's room often led to making the entire home more livable and more beautiful. Home demonstration agents reported that they frequently found that an entire family had acquired a new outlook on life because of results obtained by a 4-H club girl who had undertaken some phase of home improvement work. Accounts of this work from every State told much the same story; that is, a carefully thought out plan, combined with a willingness to work, a few dollars, much scrubbing, a little paint, and new curtains, resulted in improvements out of all proportion to the outlay of time and money.

In all, 74,401 house furnishing result demonstrations were carried on by women and girls during 1929. This was an increase of 9,907 over the total in 1928. Through this phase of home demonstration work farm people acquired new standards of beauty and simplicity in house furnishings.

In many States the improvement of home grounds received great impetus from yard-improvement contests. This work was emphasized particularly in the South during 1929. As a result, thousands of lawns were beautified, and flowers, trees, bulbs, shrubs, and vines planted according to landscape plans furnished by home demonstration agents and horticultural specialists. Native rocks were used to build walls, flagstone walks, lily ponds, rock gardens, to outline driveways and borders, to make bases for bird baths and sundials. Bird houses, arbors, and trellises for vines, and comfortable garden seats made the outdoor living rooms of many southern farm homes "a thing of beauty and a joy forever." In connection with this work farm people were influenced to give their homes an attractive name. From Tennessee it was reported that the owners of 3,000 farm homes had responded to this idea. The home-management specialist stated:

There are no duplicate names in any one of the 95 counties. Such names as Shady Knoll, Pine Nook, River Cliff, and Whispering Hollow give some idea of the lovely homes which extend from the high Smoky Mountains in east Tennessee across the green pasture lands in the middle of the State to the cotton fields along the Mississippi River.

Reports showed that the interiors of 140,753 homes had been improved and 91,757 homes had more beautiful surroundings as a result of their contacts with extension work in 1929. The satisfaction resulting to those who dwell in these homes could not be measured, but the stories of accomplishment related that all these improvements were adding joy and contentment to life in the country.

HOME HEALTH AND SANITATION

A safe water supply and sanitary sewage disposal for every farm home are ever the concern of the home demonstration worker. Reports showed that 69,392 homes adopted improved sanitary practices in 1929 as compared with 77,991 in 1928.

Many farm families installed water-supply and sewage-disposal systems according to plans furnished by the home demonstration agent and the rural-engineering specialist. "Running water in every farm and small-town home" was the slogan of a state-wide contest carried on in Illinois. Home demonstration agents reported that 1,676 water systems had been installed in the country during 1929.

Farm women and girls acquired new standards of health through extension activities. The use of the food-selection score card brought to the attention of many people the relation between food and health. Posture demonstrations brought out the fact that there is a relationship between posture and health. At many summer camps and short courses a physician was present who gave a complete physical examination to those in attendance who chose to check up on their health in this way. County and State 4-H health contests through which contestants were selected for the National 4-H health contest were the means of giving an entirely new conception of health to farm boys and girls. They came to see that good health is an asset in school and on the playground, and is a part of their working capital upon which much of their success in life depends. In connection with the health work, extension agents received hearty cooperation from doctors, dentists, and nurses, as well as from county and State boards of health.

CHILD CARE AND TRAINING

In eight States specialists were employed in this new and important field of extension work, which for the most part, took the form of parent education. Mothers, and fathers too in some cases, came together in an effort to gain a better understanding of the child mind at different stages of his development and to acquire a greater knowledge of the psychology governing the formation of habits. Parents showed marked interest in this phase of extension work, indicating a need and desire for help and instruction along these lines. (Fig. 13.)

GARDENING AND MARKETING

The recommendations made at farm and home economic conferences invariably include plans for an extensive garden for every farm home, to insure a variety of vegetables in order to safeguard health, to save money, and in many cases to sell as a means of adding to the income. The well-known injunction which is a part of extension teaching in nutrition, "use two vegetables a day besides potatoes, including green leaf vegetables and tomatoes several times a week,"

was the stimulating force responsible for the planning of many home gardens to provide a generous amount of vegetables to be canned and stored for use during the winter months. In the food-preservation work, emphasis was placed upon the food budget, that is, planning the canning to provide two vegetables a day with plenty of greens



FIGURE 13.—A home picnic in sun suits gives children healthful recreation

and tomatoes the year round. State leaders reported that the idea of a canning budget had been taking root for years and in 1929 was bearing fruit in that a large number of farm women had adopted this practice.

In the South winter gardens received much attention, and more than 30,000 persons grew winter gardens for the first time in 1929.

In many counties demonstration gardens were established, the farm home maker following plans laid out by the home demonstration agent and gardening specialists. The gardens were visited by large numbers of people throughout the season by means of tours organized by extension agents. Garden contests sponsored by local newspapers, women's clubs, and chambers of commerce stimulated this movement to a great degree. At the State fair in Mississippi in 1929 results of county contests were exhibited in order to show the possibilities of year-round gardens in Mississippi. One county exhibited a collection of 48 kinds of vegetables, and none of the 18 county exhibits showed less than 22 varieties. In addition to the vegetables shown, each county exhibited an educational poster describing the uses of vegetables in the diet. As one contestant remarked, "This is a contest in which you win even if you lose!"

Home dairying and home poultry occupied an important place in the home demonstration program of the South. Poultry work was given much attention in 1929 in hundreds of southern counties because of the possibilities of almost immediate financial returns. The home poultry flock represented one of the farm woman's chief sources of extra money necessary to make desired improvements about the home, to buy books and clothes for the family, and to keep the children in school.

As a result of this increased production of improved varieties of fruits and vegetables, better quality of poultry and dairy products, and high-grade canned and preserved foods, greater interest was shown in standardization and marketing of the farm-home surplus. Women and girls, with the guidance of extension workers, showed initiative in developing marketable articles of high quality and using packages and labels that were individual and unusual. Gratifying results were obtained in marketing, especially in the Southern States. Figures showed that the growth of curb markets in the Southern States had been steady over a period of years, showing gain in volume of sales as well as progress in business management and standardization of quality. At these markets farm women sold canned products, poultry, fresh vegetables, flowers, dairy products, and breads, cakes, and other cooked foods. Markets of this kind were operating successfully in other sections of the country as a result of home demonstration work.

Many farm women in Northern and Eastern States conducted roadside stands and tourist homes as a result of the stimulus provided by the extension service. Attractive fireside industries and farm-home enterprises such as basketry and rug making were developed. Women and girls everywhere manifested greater interest in learning to utilize profitably the resources of the farm home.

Leaders stated that the secret of financial success in home industries was standardization and craftsmanship, whether the work was with fruits, vegetables, poultry, eggs, butter, cheese, baskets, rugs, or rush-bottom chair seats.

Much of the increased income derived from these varied enterprises was devoted to improving and beautifying the home. A Florida home demonstration agent reported that as a result of encouraging farm women to grow more vegetables and poultry for home use and some for sale, they had in that county pantries filled with a variety of canned fruits and vegetables, new bank accounts, new pieces of

furniture, more shrubs, roses, and other plants, better poultry yards and houses, screens on several houses, and some new coats, dresses, and hats that would never have been bought except for the new chickens, vegetables, or canned products sold.

Turning the farm-home surplus into farm-home conveniences, into needed garments for the family, and into "go to college" funds proved to be a source of pleasure as well as profit to thousands of women and girls.

From the stories told by these people in describing their accomplishments it was evident that neither the money earned nor the articles purchased compared in importance with the development of individuals, and the satisfaction and contentment which were theirs as a result of this opportunity for self-expression in a worth-while piece of work.

SUMMARY

Increased numbers of farm women participated in home demonstration work. They helped to plan it and helped to teach others. The home demonstration staff developed more fundamental programs of work and improved its teaching methods. Cooperation of the press and a large number of outside agencies was evidence of continued confidence in and approval of the work.

Higher standards of farm home making were apparent in communities where home demonstration work was well organized, the program being so broad and inclusive that it affected the health and happiness of every member of the farm family.

BOYS' AND GIRLS' 4-H CLUB WORK

Four-H club work for rural boys and girls is one of the main lines of extension work. It seeks to take the best practices and the scientific facts discovered in experiment stations and in the laboratories of the Department of Agriculture and the State colleges of agriculture to the boy and girl on the farm. It seeks to use these practices and facts in the harmonious training and development of the head, the heart, the hand, and the health under the conditions in which the boy or girl is placed. It does not seek to take the place of school, but it does seek to utilize for educational purposes and training of boys and girls the common, everyday things found on the farm and in the home. The public recognition and constant growth of club work show conclusively that it is filling a need in the life of the people. The general plan has been adopted and put into practice in many foreign countries.

Table 10 shows the enrollment, completions, and increase over the preceding year for the last five years.

TABLE 10.—*Boys' and girls' 4-H club work: Enrollment, completions, and increase over the preceding year, 1925-1929*

Year	Total enrollment	Increase over preceding year	Total completing	Increase over preceding year
1925.....	565, 046	54, 691	329, 574	46, 291
1926.....	586, 156	21, 110	368, 305	38, 731
1927.....	619, 712	33, 556	399, 107	30, 802
1928.....	663, 940	44, 228	445, 594	46, 487
1929.....	756, 096	92, 156	507, 487	61, 893

The 756,096 members enrolled in 52,180 clubs in 1929 elected their own officers and met regularly, usually once a month, to discuss their problems and to plan how they might better serve their communities. Reports showed that men and women volunteered their services as local leaders of the clubs in order that the boys and girls in their communities might have the benefits of 4-H club work. In a number of States accredited representatives of community clubs accompanied by their local leaders held quarterly conferences at a designated place. County officers were selected, county problems were discussed, and county plans were made for the improvement of the work.

ORGANIZATION

The organization for the promotion of 4-H clubs in the several States underwent little change during the year. The passage of the Capper-Ketcham Act led to an increase in the number of agents doing club

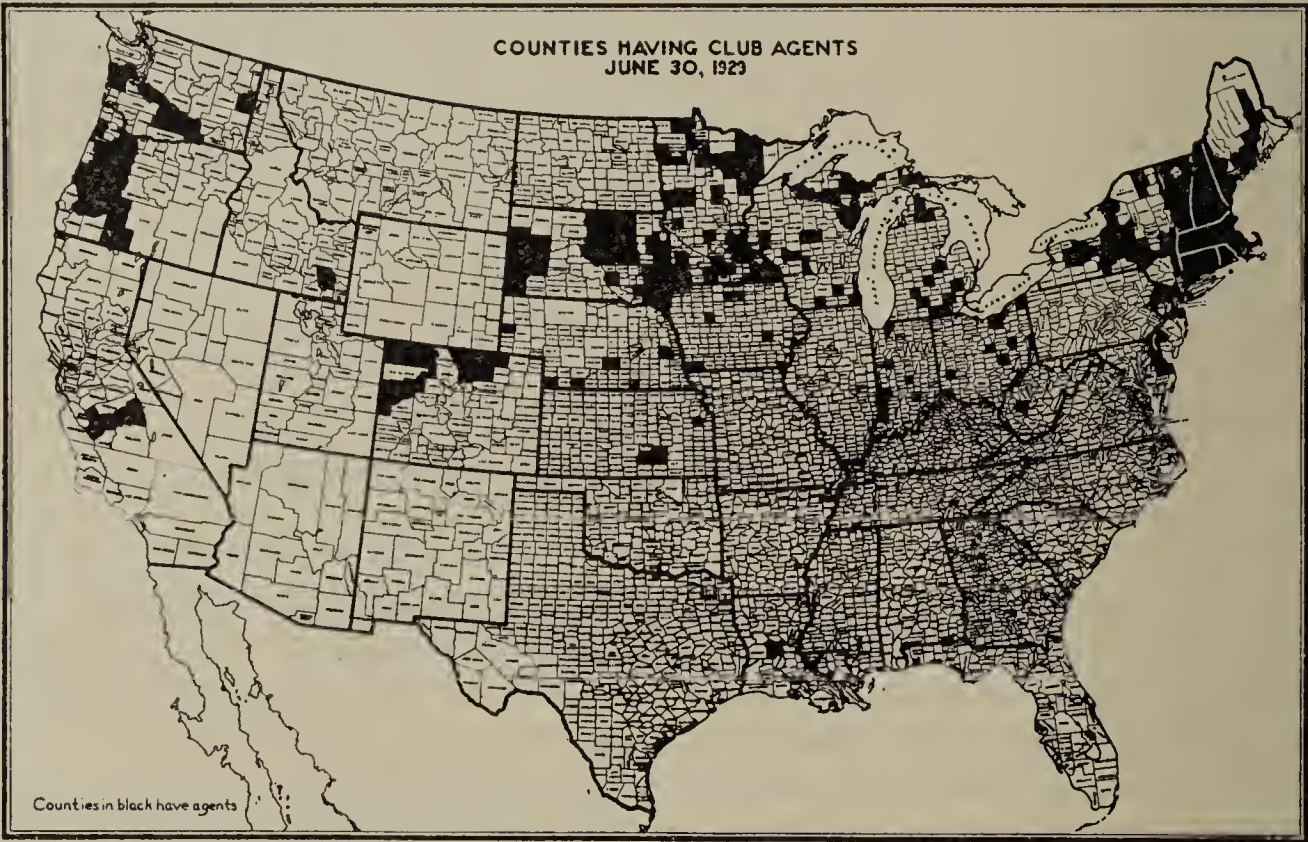


FIGURE 14.—Map showing distribution of counties having boys' and girls' club agents

work. Reports showed that this increase was found chiefly in home demonstration work and club work. (Fig. 14.)

Table 11 shows the number of projects begun and demonstrations completed by boys and girls from 1925 to 1929.

TABLE 11.—Boys' and girls' 4-H club work: Projects begun and completed in 48 different subjects, 1925-1929

Item	1925	1926	1927	1928	1929
Projects started.....	1, 079, 604	1, 161, 025	1, 330, 239	1, 466, 584	1, 614, 149
Projects completed.....	589, 440	673, 997	776, 029	882, 795	994, 262
Different boys enrolled.....	224, 633	234, 078	249, 553	270, 534	303, 509
Different boys completing.....	133, 076	145, 202	153, 324	175, 069	201, 910
Different girls enrolled.....	340, 413	352, 078	370, 159	393, 406	452, 587
Different girls completing.....	196, 498	223, 103	245, 783	272, 510	305, 577

A completed demonstration or project is one in which work planned has been completed and the records kept and turned over to the

person authorized to receive them. Boys and girls too frequently failed to keep records and often failed to turn them in after they had been kept. The figures in Table 11 represent projects in 48 different subjects. In Table 12 are listed the lines of work in agriculture and home making in which boys and girls on the farm were most interested in 1928 and 1929.

TABLE 12.—*Boys' and girls' 4-H club work: Enrollment in 4-H clubs in 16 major lines of work, 1928 and 1929*

Project	1928	1929	Project	1928	1929
Clothing.....	252,077	287,791	House furnishing.....	69,634	76,665
Food preparation.....	156,938	173,724	Swine.....	51,753	51,729
Food preservation.....	123,814	133,571	Dairy cattle.....	40,434	50,992
Home gardens.....	110,989	124,936	Corn.....	39,094	41,158
Nutrition.....	106,620	112,232	Home management.....	37,045	27,700
Health and sanitation.....	104,824	131,537	Cotton.....	30,379	36,283
Poultry.....	97,890	99,864	Potatoes.....	18,384	19,765
Beautification of home grounds.....	75,460	82,694	Beef cattle.....	10,275	12,243

It is worthy of note that both boys and girls participated in every line of demonstration named in Table 12. Reports showed, however, that girls selected principally demonstrations that pertained to the home while boys selected those that had to do with the activities of the farm. Both boys and girls, however, seemed to be much interested in nutrition and home health and sanitation. It augured well for the future that improved physical development and the maintenance of health made such a strong appeal to rural young people.

STUDIES

In the beginning of the work 4-H clubs were a virgin field of educational effort. The foundation of the organization was so laid as to conform to the accepted mode of the development of human beings by using the common things of rural life which had always been present but had been little used for educational purposes. Simple as this idea appears, it required much study on the part of the leaders to ascertain the factors that make for the orderly establishment and development of the work. Reports showed that in 1929 the leaders made great progress in the formulation of specific systematic programs for the development and improvement of the work. The annual conferences of leaders at the time of holding the national 4-H club camp (fig. 15), aided by the studies made by the educational and sociological departments of several leading colleges under the supervision of their scientific experts, have resulted in great improvement of the work. The club organization was strengthened by the encouragement given the young people to study the facts under their own officers and to make their decisions from their own findings. Reports showed that many communities had been greatly improved by the cooperative efforts of 4-H clubs.

METHOD OF INSTRUCTION

County extension agents were partly responsible for the subject-matter instruction given to club members on the several projects demonstrated. The group method of instruction was used. Where volunteer adult local leaders for the clubs had been obtained, the

county agents spent much time in training these leaders, who, in turn, taught the members. The agents visited the clubs whenever time permitted. Sometimes older boys and girls were used as local leaders. It was found best, especially in doing "follow-up" work, to have local leaders. Where no local leaders had been obtained, the agents while making their regular rounds over the country met the clubs at scheduled times and places.

LITERATURE

The subject-matter literature used in the instruction of 4-H clubs was prepared by the leaders of club work and the specialists in the different lines of work in the United States Department of Agriculture



FIGURE 15.—General view of National 4-H Club Encampment, Washington, D. C.

and the State colleges, cooperating. This literature consisted of circular letters, mimeographed material, and bulletins. In addition, a large number of States issued monthly publications for club members. Many of these publications carried not only the letters of club reporters and stories of efficient club work, but also monthly instructions to members on projects being demonstrated. These publications were found to be of great value in the promotion of club work and in encouraging club members to express their thought in writing for publication.

In recent years much attention has been given to literature especially prepared for the volunteer leader in order to make him feel equipped to handle all matters pertaining to the local group over which he has supervision.

For several years the United States Department of Agriculture issued a publication entitled "Boys' and Girls' 4-H Club Leader,"

which was sent to agents engaged in club work throughout the country.

This publication had much to do with popularizing the work. It stimulated an increase of news writing in extension offices and proved to be a valuable aid in encouraging club members to work for higher standards and greater achievements in farm and home demonstrations. For the good of all extension work, this publication was supplanted by the Extension Service Review, which covers all lines of extension work.

CLUB OFFICERS' TRAINING SCHOOLS

Reports show that training schools for club officers were held in a number of States. The purpose of these schools was to train club officers in methods of club organization, program analysis and development, and special activities pertaining to the duties of their office. Definite programs were worked out in advance. These conferences were reported to be popular with the officers and very valuable to club work.

ACHIEVEMENT DAY

Achievement day was a type of meeting used extensively. The clubs of a county, with their leaders, assembled at the county seat on an appointed day at the close of the club year. With banners flying they marched, sang club songs, yelled club yells, and generated much enthusiasm. Every one in the town learned of the existence of the organization. Some prominent citizen made an address to them, and prizes for outstanding work were awarded.

On these occasions the clubs usually were the guests of some business organization or civic club. Dinner was served, and the members were taken to a motion picture. They returned to their homes determined to "carry on" for another year. Achievement days have proved to be very helpful in the promotion of the work.

SHORT COURSES

Short courses were held at the State colleges of agriculture. There the boys and girls were brought into contact with men and women who had made a close study of the psychology of youth. From these instructors they received intensive instruction for a week or more on the projects they were demonstrating on their farms and in their homes. They learned something of the purposes of their agricultural colleges and gained inspiration to seek higher training. Reports showed that hundreds of boys and girls decided to attend college as a result of the experience gained at short courses. (Fig. 16.)

Club members came to these short courses from every section of their State. Some came at their own expense on money they had made in club work the preceding year, some were sent as representatives of their clubs, and still others were sent as representatives of county organizations.

Reports indicated that the State short course was one of the best meetings held for club members each year. The equipment at the college, the teaching force available, and the expert supervision of recreation contributed toward the successful outcome of this meeting.

The boys and girls established new friendships and returned to their homes full of enthusiasm to report to their clubs.

FAIRS

Products of boys' and girls' club work were exhibited at community, county, State, regional, and national fairs and the International Livestock Show. Reports show that fairs were held in every State. The larger regional fairs were located at Portland, Oreg.; Denver, Colo.; Omaha, Nebr.; Memphis, Tenn.; and Springfield, Mass. The National Dairy Show is located at St. Louis, the National Poultry Show at New York, and the National Leadership Training School at Springfield, Mass.

In 1929 thousands of dollars were won by boys and girls on their exhibits at these fairs. They learned by comparison of products to raise the standards of excellence. Judging teams contested in a great number of the lines of endeavor. Massachusetts won the



FIGURE 16.—Girl club members taking a short course at college

national championship in judging poultry, and Oklahoma, for the second time in succession, won the national dairy-judging contest, which again gave to that State the right to represent the United States at the English Royal Livestock Show in London. The American team defeated the English team in 1929. Oklahoma also won the livestock-judging contest at the International Livestock Show at Chicago.

Method demonstrations were staged by club members at nearly all fairs. Through these demonstrations club members and the public were shown the best practices and latest methods used in doing a particular piece of work. Reports showed that the exhibits at fairs were among the best agencies used by extension departments to convince business men of the value of 4-H club work. At fairs probably more than anywhere else, boys and girls learn to win without boasting and to lose without whining.

CAMPS

The idea of holding camps for 4-H club members originated in 1914 with a county agent in West Virginia who was seeking the 4-square training of his club members. So well did the camp serve its purpose that the idea took deep root in the club organization and spread rapidly throughout the whole country. Reports showed that in 1929 camps were held in every State.

At these camps, two methods of grouping for instruction were used. The first grouping, according to ages regardless of the demonstrations made at home, was based on the idea that club members need knowledge of every activity on the farm or in the home. In the second plan—grouping by demonstrations—the members were grouped for instruction according to the demonstrations they were making at

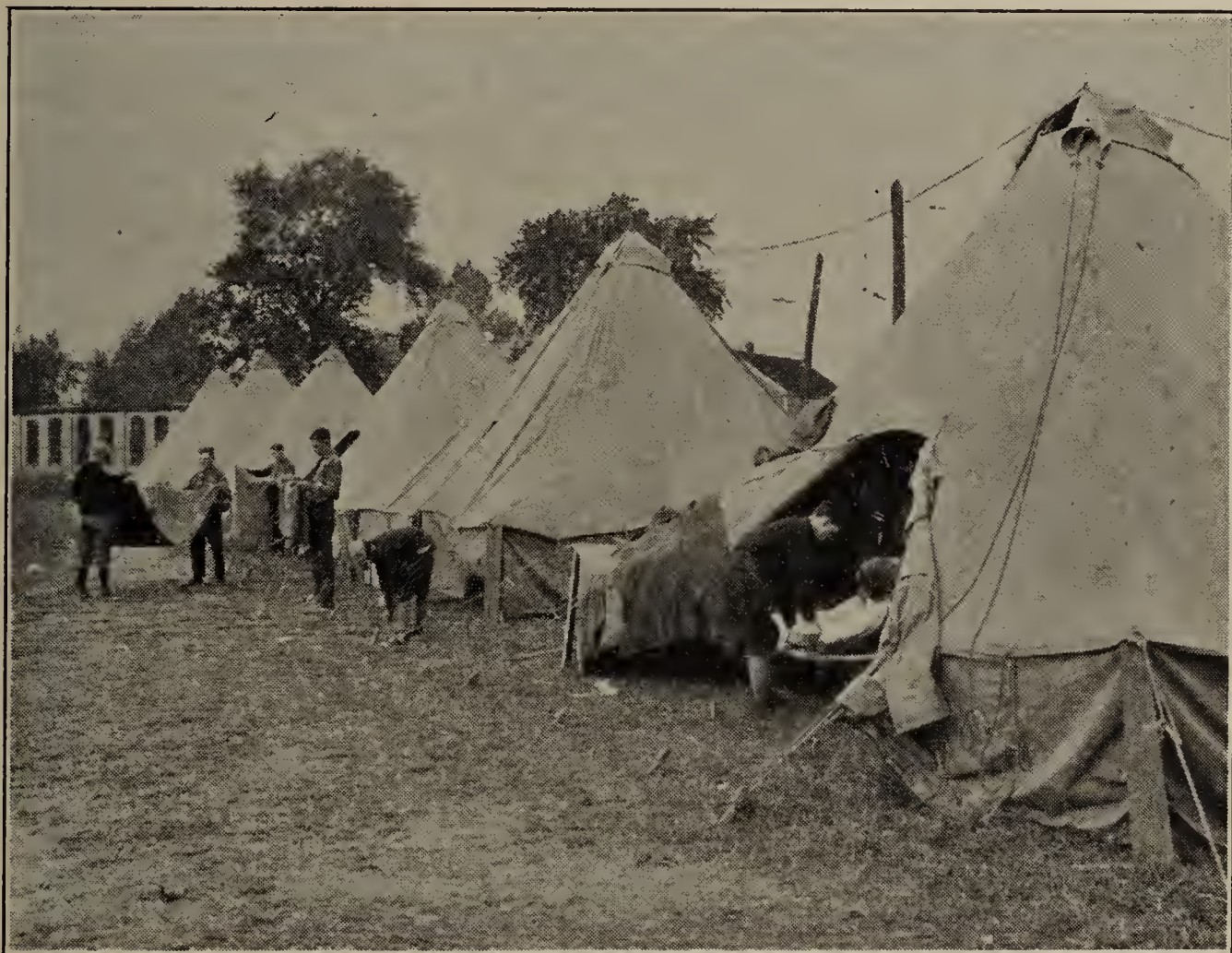


FIGURE 17.—4-H club boys preparing tents at an annual camp

home, and according to the number of years they had been making demonstrations. This method was based on the idea of election of subjects. The forenoons usually were used for technical instruction. Instruction was also given in the organization and management of clubs, in program building for the club and the community, in organized play, and in music appreciation. The members were taught to sing together, to play together, to cooperate. (Fig. 17.)

The camps performed their function so well that some of the colleges used them for college activities. Other colleges assisted clubs in the purchase of camp sites and the building of cottages. Many camps were owned by 4-H club boys and girls. To represent the home State in the national camp at Washington is the highest goal to which club members may aspire. At this camp two boys and girls,

selected for their outstanding work, represent each State. They visit experiment stations at Arlington, Va., and Beltsville, Md., have conferences under the guidance of national leaders, make tours to places of historic interest, and meet leading men and women in the capital of their country. This camp has a considerable value in unifying the work throughout the country and in developing a high degree of patriotism among the boys and girls.

RECREATION

The value of play has never been fully recognized among America's rural people. In the establishment of 4-H club work an attempt has been made to create an organization in which health-giving play, songs, and music appreciation shall be a regular part of programs of exercise in club meetings, at short courses, and in camps. These activities have aided in developing boys and girls along 4-H lines and have assisted leaders in the promotion of their work.

Ella Gardner, of the Children's Bureau, United States Department of Labor, and John Bradford and John Jackson, of the Playground and Recreation Association of America, held training schools for boys and girls at camps and short courses in many States during the year. In addition, institutes of three days' duration were held for adults and older boys and girls.

In all these meetings there was great enthusiasm. Jack Stuart Knapp, of the Playground and Recreation Association of America, was detailed by that association to assist in dramatics. The work of these individuals was helpful to extension work and demonstrated in many places the value of play among people in the open country.

RADIO

In 1929 progress was made in the use of radio in 4-H club work. For some time the Department of Agriculture has been cooperating with the agricultural colleges in putting on a 4-H program once a month.

Each month this was broadcast over the United States, and the clubs were encouraged to meet at the hour of the national broadcasting program and to make it a part of their regular monthly program. They were encouraged also to invite their parents and friends to attend this meeting and listen in. This program usually consisted of talks by boys and girls and club leaders from different States and leaders in the Department of Agriculture and, on several occasions, music by the Marine Band was included. Reports from the States showed that this program was greatly enjoyed. In addition to the national program sent out from Washington, many States broadcast programs from the colleges. This method of communication in club work proved to be valuable and popular.

THE OLDER BOY AND GIRL

The retention of boys and girls for a long term of years in 4-H club work has always been and continues to be a great problem. In 1929 an improvement in this respect was reported. The father-and-son partnership plan held some; the creation of a club composed only of members who had been in the work five or more years held others; but the plan of using the older boys and girls as leaders or assistant leaders of clubs was shown in the reports to be the best method yet

discovered. Their attendance at leader-training schools and their contacts with men and women prominent in the work seemed to create within them a desire to serve their community, their county, and their State. The local 4-H club furnished the opportunity to serve.

SPREAD OF INFLUENCE

Crops, livestock, health, home furnishings, home grounds, and clothing were greatly improved throughout the country through the medium of 4-H club work. Families were taught to dress economically, appropriately, and comfortably; home grounds were landscaped and beautified with shrubs and flowers; interiors of homes were changed for comfort and convenience; pantries were filled with canned goods; food was prepared in a more palatable manner; nutrition and the rules of health were studied and taught. Reports showed that many of these improvements gradually extended to the families and homes of neighbors. The spread of influence could be traced more easily in crop and livestock clubs than in home clubs. The plan that

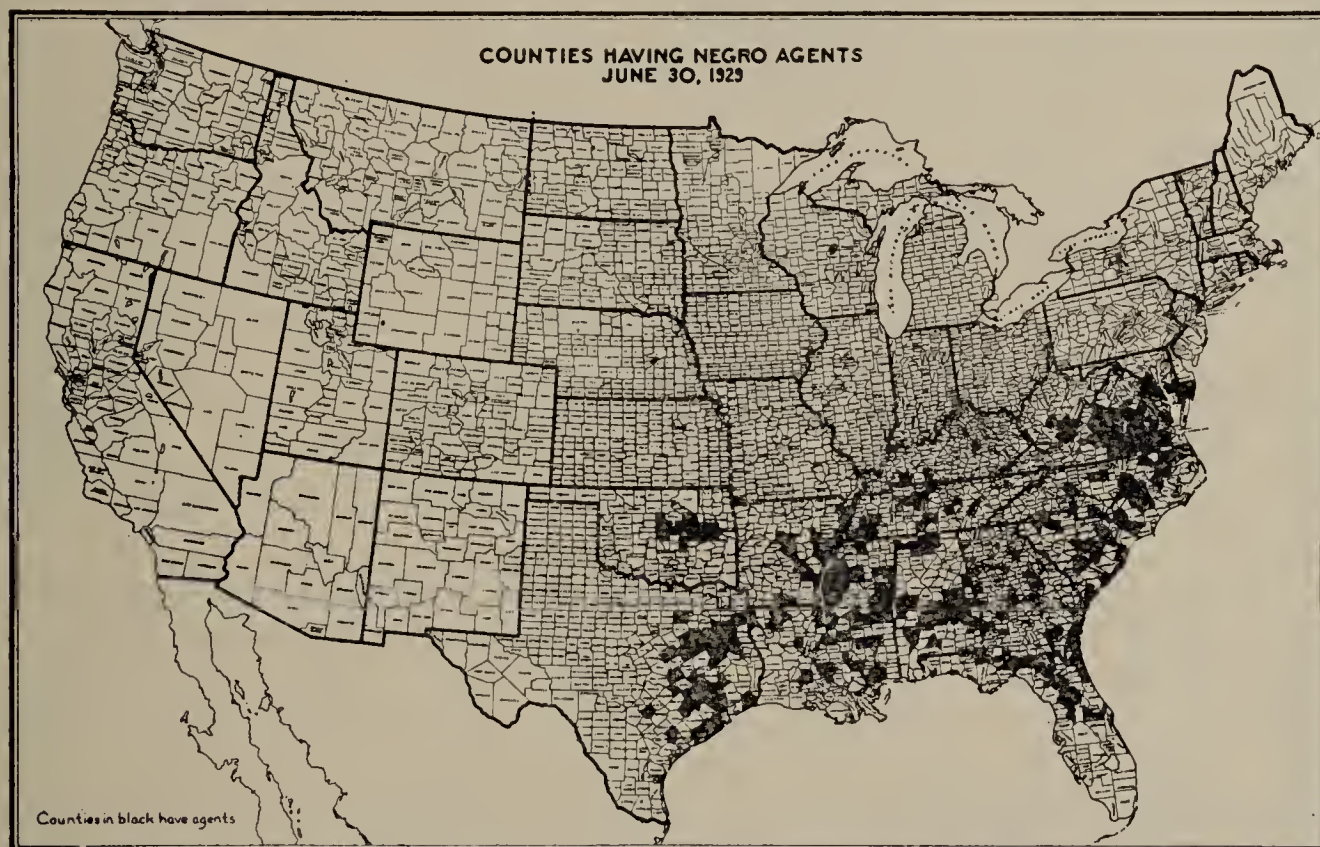


FIGURE 18.—Map showing distribution of negro county agents

had usually been pursued in the past was as follows: Extension workers selected members of clubs in different localities. These members were furnished with the seed of the crop being promoted, and they agreed to keep the seed as pure as possible and to sell part of it to neighbors. In a few years, it was found that the variety had spread over the entire section.

EXTENSION WORK WITH NEGROES

Extension work with negro farmers and their families was carried on by the white extension agents in all the States where there were large numbers of negro farmers, but their work was not separately reported. Negro men and women extension agents were employed in the 14 Southern States and in West Virginia. (Fig. 18.) They worked primarily but not entirely among the rural people of their own race. It is the work of this special group of agents designated as local farm and home agents, which is referred to as negro extension work.

During the year 30 additional negro agents were employed, bringing the total number to 327 on June 30, 1929. (Table 13.) Of these agents, 192 were men, and 135 were women. Of the 30 new workers employed, 11 were farm agents, 17 were home agents, and 2 were supervisors. In addition, 2 negro field agents were employed by the Department of Agriculture with headquarters at Tuskegee Institute, Alabama, and Hampton Institute, Virginia, respectively. They represented the department in its contacts with the negro agricultural colleges and with negro supervisors and local agents in the field, and had general supervision of this phase of extension work.

TABLE 13.—*States in which negro agents were employed, and the number in each State, June 30, 1929*

State	Agents	State	Agents	State	Agents
Alabama.....	40	Maryland.....	2	Texas.....	47
Arkansas.....	23	Mississippi.....	43	Virginia.....	29
Florida.....	16	North Carolina.....	27	West Virginia.....	3
Georgia.....	30	Oklahoma.....	14		
Kentucky.....	4	South Carolina.....	20	Total.....	327
Louisiana.....	20	Tennessee.....	9		

Extension work among negroes followed the general extension program for agricultural improvement in the respective States, with adjustments to meet the economic situation and living conditions of negro farmers and their families. There were no marked changes in the work during the year. Programs of work dealt with the fundamental problems of the negro farm and home, and as in previous years, were worked out cooperatively with farmers and were based upon local economic conditons and the needs of the farmers to be served.

Reports from all the States showed that the farm and home agents were expanding and improving their extension organizations. The general trend was to organize county units which were based on representatives from community units in both adult and junior work. The community clubs were concerned with the development of the immediate localities; the county councils or advisory boards promoted farmers' congresses, fairs, tours, extension schools, and 4-H club activities, obtained local aid for the agents' support and promoted cooperative marketing and buying. State advisory boards or councils brought in representative farmers from all the counties especially served by local farm and home agents, in the effort to assist still further in interpreting the States' "live at home" program of work.

In carrying out programs of work voluntary local leaders played a large part. Extension programs were worked out cooperatively by the negro local agents and the people concerned in 4,497 different communities in the South during the year. In all, 6,053 voluntary county and community local leaders were actively engaged in forwarding the extension programs in 4-H club work.

GENERAL ACTIVITIES

Negro local agricultural agents reported visits made to 33,092 different farms in conducting extension work during the year, and home demonstration agents visited 33,430 different homes. Agents distributed 136,644 bulletins, prepared 3,728 news articles for the local and

State press, and wrote 153,453 individual letters relating to their work. Negro extension exhibits were made at 967 local and community fairs and 304 county fairs. In addition, impressive exhibits of the results of negro extension work were made in practically every State and district fair in the South. Many of these were so meritorious as to receive editorial commendation from State and metropolitan papers.

Extension work among negroes was carried on largely with organized groups or clubs in the communities. Agents worked with 3,442 adult clubs with a membership of 26,149 men and 40,333 women, and with 3,943 4-H clubs with a membership of 28,200 boys and 53,427 girls. During the year 599 extension schools and short courses were held, with a total attendance of 82,719 adults and young people. Method and result demonstration meetings to the number of 38,290, with a total attendance of 593,367 persons, and 4,301 other meetings, with a total attendance of 425,504, were held in furtherance of different phases of extension programs.

THE "LIVE AT HOME" PROGRAM

The "live at home" program generally advocated throughout the South was especially emphasized in negro extension work. The basic features of this program were having a home garden, a farm flock of poultry, and a family cow, and the production of sufficient meat for the family use and of ample food and feed for family and livestock, including poultry.

HOME GARDENS

A total of 23,720 negro men and women were enrolled in garden clubs, and 18,322 home garden demonstrations were carried through to completion by adults and reported on as an example to the respective communities of the food and income to be derived from a well-planned and cultivated garden. Interest in home gardens was augmented by contests, meetings, tours, monthly garden letters, and other extension means throughout the year. The influence of this work was widespread. In Albemarle County, Va., where 12 garden demonstrations were conducted and the monthly letter and other means were used to arouse interest in the project, 187 negro farm families were reported as having productive gardens from early spring until late fall. Similar interest in gardens was reported by most of the local agents. (Fig. 19.)

Extension work in nutrition, food preparation, and food conservation was closely and effectively correlated with the home-garden project. Tens of thousands of negro farm families, other than the demonstrators, enjoyed better health and higher standards of living than they had heretofore because of the influence of the garden demonstrations and campaigns. Not only did the home garden supply food for the family use, but thousands of families were able to supplement the family income materially by the sale of fresh vegetables.

In many counties curb markets for the sale of garden products were the outgrowth of the home-garden activities. Most of this work was carried on by the women through the efforts of the home agents. Where there was no established curb market, these agents often helped to find a market for carefully selected vegetables at hotels, schools, mill settlements, and other places, and impressed on their garden-club members the necessity of meeting "consumer demand" by the proper selection, grading, and preparation of their products for market.

Home gardens were selected as their 4-H club project by 26,335 negro girls and 1,589 negro boys. Of these club members, 17,463 completed their project and made final reports. Many of these girls and boys took over the responsibility of planting and caring for the family home garden and received the money for the sale of any surplus products.

Rhodie Brown, of Greenville, S. C., sold \$92.50 worth of vegetables from her garden, and thousands of other club members made substantial additions to their college funds or savings accounts through their work in this project.

POULTRY

A poultry flock of from 20 to 50 purebred hens on every farm was the goal set by practically every community, in formulating its negro



FIGURE 19.—A home garden cultivated under direction of a negro county agent

extension program for 1929. The goal, of course, was not reached but substantial progress toward it was reported. There were 584 poultry-club groups of negro women, with an enrollment of 19,293 persons receiving instructions from the agents during the year. In addition, 15,060 girls and 549 boys chose poultry for one of their 4-H club projects. The things especially emphasized with these clubs and demonstrators were the value of purebred stock, proper housing, sanitation, and feeding. More negro farmers than ever before sold poultry at the cooperative car-door sales held in various States. Many negro farmers were reported to be well-established producers of purebred cockerels and day-old chicks. In Virginia, 13,069 birds valued at \$12,240, including eggs, were reported as sold in the completed demonstrations by the 620 4-H poultry members in that State.

Poultry raising was reported by all agents as an important source of the income received by negro farmers and their families.

Turkey raising was an outstanding part of the year's work in some sections, especially with women and girls. The women and girls of Lowndes County, Ala., sold cooperatively \$14,489 worth of turkeys during the month of November, 1929. In Montgomery County, Ala., at a turkey sale conducted by the farm bureau with the assistance of the white and negro extension agents, 33,250 pounds of turkey were sold, more than 80 per cent of which, it is estimated, came from turkeys raised by negro farmers. Six Mississippi women were reported to have kept their children in school and college with money made from poultry. Money received from the sale of poultry and eggs enabled thousands of negro women to make long-desired improvements in the kitchen and in other parts of the home, or to carry out their home-beautification project.

HOGS

Negro farmers possibly owned fewer hogs than they had owned several years before, but the total value of all hogs was much greater than formerly. The farmers are rapidly learning the value of well-bred animals and therefore replacing the scrub or razorback hog with a purebred or at least a well-bred stock. As an illustration of this tendency, the local agent in Montgomery County, Ala., reported that 21 negro farmers had purebred-hog projects under way in his county. They began with 37 purebred sows, which at the first farrowing produced a total of 269 pigs. At the date of reporting, the total value of pigs and sows was estimated at \$6,865. An agent in Ware County, Ga., told of inducing a farmer near Waycross a year or two previously to dispose of his native south Georgia stock and purchase a few purebred spotted Poland China sows from a leading breeder in the county. On May 1, 1929, the farmer had 35 purebred spotted Poland Chinas which he was selling to his neighbors at three or four times the price he formerly got. The widespread interest in hog growing among negro farmers was shown by the fact that the negro agents supervised 2,443 completed swine demonstrations by adult farmers, involving a total of 17,781 animals. There were also 171 junior clubs organized during the year, with a membership of 4,378 boys and 334 girls. During the year 953 purebred sires and 1,060 purebred females were obtained by the negro farmers with the assistance of local agents.

The growing at home of ample feed for the livestock was advocated in connection with all livestock projects. In most of the States each boy or girl member enrolled in the pig club was required to grow an acre of corn also.

The butchering and home curing of meat was also recommended as an auxiliary project to that of hog growing. In Georgia, local agents reported giving 203 meat-curing demonstrations during the year. These demonstrations were witnessed by 1,467 people and involved the curing of 37,582 pounds of meat. The agents also conducted 181 demonstrations in butchering and trimming meat, using 329 hogs. These demonstrations were witnessed by 753 people.

Meat shows were a feature of nearly every negro exhibit at local county and State fairs in the South. Often such a show was put on in connection with the negro-farmer gatherings or conferences in the

county. At a conference in Dallas County, Ala., in February, 1929, 500 home-cured hams were shown, speakers discussed subjects of interest to the farmers, and a demonstration was given of the treatment of hogs to prevent hog cholera.

DAIRYING

The campaign to have every family own a cow was carried on with gratifying success during the year. A great many more negro farm families had milk as a part of their daily diet in 1929 than ever before.

More than 9,000 negro women were enrolled in home dairy work. On the commercial side dairying, a total of 6,097 result demonstrations were carried through to completion by adults under the direction



FIGURE 20.—A negro club member with her project cow

and supervision of local agents. Dairying was also an important 4-H club project, 483 boys and 4,831 girls having been enrolled in the 355 junior dairy clubs reported organized by local agents. The usual requirement was the ownership and care of a grade or purebred dairy heifer. (Fig. 20.)

Three hundred and ten farmers were assisted in obtaining purebred dairy sires, and 462 in obtaining purebred females. According to a census taken by local agents in Texas, negro farmers in the 23 counties where such agents were located, owned 868 purebred milk cows in 1929. Including all dairy cows, purebred and grade, negro farmers in these counties owned 15,800 milk cows, of an estimated value of \$265,000. Of this amount, \$85,457 worth of cows were purchased during the year with the assistance of the local agents and dairy specialists.

Negro farmers in many localities in every southern State sold substantial amounts of milk and cream. Negro demonstrators in Harrison

County, Tex., marketed \$38,000 worth of milk during the year, and in Harris County, Tex., they marketed \$12,000 worth.

Negro county councils in 50 Texas counties established dairy-bull circles, and the projects were successfully handled. White and colored farmers in Dallas County, Ala., worked out a plan for marketing milk and cream by arranging for six trucks to pick up the milk daily and carry it to the creamery at Selma. As a result, one community sold over \$50,000 worth of milk and milk products during the year, and others sold substantial amounts.

Mississippi home agents reported that large numbers of housewives of their race bought dairy thermometers, churns, and butter molds to put into practice the better methods of handling milk and butter, learned from the agents. One of these demonstrators was sending her daughter to the Alcorn Agricultural and Mechanical College, paying her way with funds received from her home-dairy products. Another, a tenant's wife, used \$423 similarly earned to purchase 20 acres of land on which her family expected to establish a home. Others remodeled and improved their homes with the money earned in the home-dairy work.

FIELD CROPS

Corn was the major feed crop grown by negro farmers, but large quantities of oats, soybeans, cowpeas, velvetbeans, peanuts, and other legume feed and forage crops were also grown. There were 3,837 completed demonstrations in corn culture supervised by the local agents. Corn growing was a popular project in the 4-H club work, 8,176 boys and 239 girls taking that work. On the 7,117 acres of corn grown by junior-club members who reported on their completed project, a total of 190,000 bushels, or an average of 25 bushels per acre, was produced. Many individual club boys obtained yields of corn ranging from 50 to 80 bushels per acre.

In Virginia the 725 boys who made final reports averaged 39 bushels of corn per acre. In Georgia 568 club boys who made final reports averaged 33½ bushels per acre, and 308 in Alabama averaged 31.2 bushels per acre.

The adult negro farmers are rapidly learning the importance of better seed, proper mixing and use of fertilizers, and the value of crop rotations. Yields of from 40 to 50 and more bushels per acre were common on the community corn demonstration areas, usually 5 acres or more in extent, and the lessons to be learned from these demonstrators were brought home to the negro farmers in the community by field meetings held on the demonstration areas and in other ways.

In a Texas corn contest the prize-winning plot produced slightly more than 100 bushels of corn per acre, and there were numbers of contestants who produced yields of 90 or more bushels per acre.

The extent of the interest in legume feed and forage crops was shown by the number of demonstrations completed by adult farmers, which were supervised by the local agents. There were 2,087 demonstrations with cowpeas, 1,574 with soybeans, 1,242 with peanuts, and 797 with velvetbeans.

Negro farmers are also becoming aware of the value of pastures. Eighty-four local agents reported that they supervised a total of 921 pasture demonstrations during the year.

CASH CROPS

Much time and effort were given to demonstrating the best methods for the economic production of the usual cash crops of the South grown by negro farmers—cotton, sweetpotatoes, and tobacco. Agents reported the completion of 3,148 cotton demonstrations by adults. These illustrated the importance of better seed preparation, close spacing, liberal fertilization, and good cultivation in producing high yields per acre at a low cost per unit.

The methods of controlling diseases by seed treatment, and boll weevil and other insects of cotton by mopping and dusting, were widely demonstrated, and the recommended practices were followed during the year by an unusual number of farmers, in addition to the demonstrators.

Because it seemed to offer the surest means of profit, cotton was the leading project in the 4-H club work of the boys, and many girls also selected it. A total of 4,063 boys and 290 girls reported on their completed cotton demonstrations. Many of them obtained large yields and made gratifying profits.

In the Texas cotton contest for adult farmers, the first-prize upland acre produced 2,763 pounds of seed cotton, the second 2,553 pounds, and the third 2,400 pounds. The average yield obtained by all the demonstrators in every State was from two to three times the usual yield in the locality of the demonstration.

Cotton-club boys in Georgia cultivated 309 acres of land, which yielded a total of 224,978 pounds of lint cotton, valued at \$15,748. A girl, Arvilla Peacock, of Muskogee County, Okla., won the first prize, a gold medal, offered in that State in the cotton contest sponsored by the cotton growers' association.

SOIL IMPROVEMENT

Negro farmers were awaking to the necessity of improving their soils as the first step toward economic production. Unusual interest was shown in terracing. Agents supervised 3,345 completed demonstrations in terracing and the installation of drainage systems during the year, and reported the draining of 24,986 acres. The protection of 68,418 acres from erosion by terracing and other means during the year was largely brought about in the course of demonstrations of effective methods in the respective communities. In some States terracing clubs of 4-H boys were given special training to equip them to do terracing for others. County boards of supervisors in many instances provided the agents with farm levels, and the community clubs in many localities purchased levels to be used by their members after they had learned from the local agent how to use the levels.

Thousands of demonstrations in the use of commercial fertilizers, farm manures, limestone, and the effect of plowing under green manures, were effectively completed. In many such demonstrations the productivity of the land had been more than doubled.

In one soil-improvement demonstration in Grenada County, Miss., the productivity of the land was increased from a capacity of 10 bushels of corn and 800 pounds of seed cotton per acre, so that after two years of plowing under legume cover crops, following with peas, it produced with liberal fertilization 2,100 pounds of seed cotton and 85 bushels of corn per acre.

All the prize-winning acres of corn in the Texas contest producing from 90 to 100 bushels of corn per acre were planted on land on which legume cover crops had been grown and plowed under.

Negro farmers greatly increased the growing of legumes suitable for their soils, both for feed and forage, and for soil improvement.

FOOD PRESERVATION

In addition to the information given the women and girls in relation to home gardens, poultry, and the home dairy, local home agents instructed many thousands of rural women and girls in food selection, preparation, and preservation. Instruction in nutrition was also given in connection with the food work.

Food preservation was emphasized as a means of providing a suitable and ample year-round diet for negro farm families, 25,242 women and 29,347 girls being enrolled in these projects. More than 2,000,000 quarts of fruit, vegetables, meat, and fish were canned by adult and club members; 90,935 pounds of fruits and vegetables were dried; and more than 500,000 quarts of jellies, preserves, fruit juices, and pickles were put up. Whole beef canning, with the use of the steam-pressure cooker for processing, was popular in Arkansas as a means of keeping a supply of meat on the farm. Five beeves, which filled 800 cans, were put up by the club groups in Pulaski County, Ark.

CLOTHING

Instruction in selecting materials and in designing and construction of clothing suitable for the needs of various members of the family was eagerly sought by thousands of women and girls. During the year 19,820 women and 34,126 girls were enrolled in clothing clubs. High standards were set in both women's and girls' clothing work. Wash-dress contests were popular among the club women. Many 4-H club girls were able to earn money after making their own clothes by doing sewing and making clothes for others, as the result of the instruction they had received. Women and girls in 24,503 different homes were reported as having been benefited through the clothing work.

During the year 269,692 dresses and undergarments and 6,428 hats were made by women and club girls in accordance with the instruction received. (Fig. 21.)

HOUSE FURNISHINGS

Many club women saved money to buy better equipment for kitchens and dining rooms. Kitchen-improvement contests held in all States did a great deal toward changing dingy cookrooms into pleasant, colorful kitchens. A larger supply of household linens, particularly more appropriate curtains, bed coverings, and table linens, was put into family chests. Many 4-H club girls began their married life with a good supply of practical and beautiful linens made under the direction of the home agents.

In spite of the lack of money, and other hindrances, each of the 45 homes in which the Alabama movable school was held was beautified. This work was accomplished by binding and hanging a colorful picture, by dyeing rags or sacks to make rugs for the floors, by making and hanging curtains for the windows, by making a spread

for the bed, or by refinishing the furniture. Before leaving a home, the movable-school agent always saw that the home was made into a better place in which to live. A total of 17,265 women and 14,768 4-H club girls were interested in studying house furnishing under the guidance of local home agents.

Negro women and girls also showed real interest in the problems of systematizing household work, in procuring and using labor-saving devices, in making food and clothing budgets, and in keeping household accounts. There were 13,895 women and 10,256 girls enrolled in home-management clubs. In view of the nature of the work required, it was surprising that more than 60 per cent of the women and approximately 50 per cent of the girls completed their work.



FIGURE 21.—A clothing project conducted under the supervision of a negro county agent

During the year women and girl club members obtained 8,344 separate articles of labor-saving equipment for their homes. These included such articles as washing machines, fireless cookers, sinks, vacuum cleaners, cabinets, pressure cookers, and iceless refrigerators.

HEALTH AND SANITATION

A great deal of extension activity in negro extension work was directed toward better health and sanitation. Health score cards were kept by more than 11,000 persons, home-nursing studies were carried on by 7,761, and methods of first aid in case of accidents were learned by 8,580. During the year 1,900 sanitary closets were installed according to plans furnished by agents, and 2,514 additional

homes were screened. In all activities concerning health and sanitation carried on by farm and home agents, approximately 50,000 people were enrolled and instructed during the year.

In Alabama, Mississippi, and Arkansas a health nurse accompanied the movable school which was a feature of the negro extension work in those States. Agents in all the States cooperated with the schools in conducting health activities for negro health week programs.

COOPERATION

In the conduct of negro extension work agents had assistance and cooperation from white and negro business men and industries in providing prizes for contests, and fair premiums. Negro organizations of all kinds and the professional and business men of the race showed deep interest in the work, and aided and assisted it in many ways. This phase of extension work also received much helpful publicity from county and State newspapers and periodicals.

It was, however, much more difficult to obtain local county appropriations in adequate amounts to pay salaries and travel expenses of local agents and to provide efficient office facilities than in the case of white agents. The solution of this problem would seem to be paying salaries and expenses of negro agents from Federal and State sources.

FARMERS' INSTITUTES

During the fiscal year ended June 30, 1929, farmers' institutes were officially conducted as a state-wide activity in 11 States. This was 2 less than the number of States that held farmers' institutes in 1928 and was the same as the number that held institutes in 1927.

When the amount of money contributed by the Federal Government for cooperative extension work in each State is considered together with State offset funds and county and private contributions, it is surprising to find that Iowa farmers and others in the neighborhood where farmers' institutes were held during the year, again contributed to this work the sum of \$17,748.86, which is more than that contributed during the previous year, and is equal to more than four times the State appropriations of \$4,295.51 for farmers' institutes. Likewise, in Indiana, the State appropriation of \$13,594.17 for farmers' institutes, was augmented by private contributions, mostly from farmers, of \$19,973.93, which was almost one and one-half times the State funds, and was \$323.23 more than the private subscription in 1928. Farmers and other individuals in South Dakota contributed \$3,454.39 for farmers' institutes during the year, which was more than twice the State appropriation of \$1,697.61 for this work, while the private contribution of \$1,700 in Georgia was over one and one-half times the State appropriation of \$1,040.71 used for farmers' institutes. These four instances of private contributions, mostly from farmers, which exceeded the State appropriation from one and one-half to more than four times, together with private donations of \$4,865 in Illinois and \$12,430.26 in Ohio as a supplement to their already large State appropriation for farmers' institute work, show that in these six States at least many farmers must believe they are getting some benefit from farmers' institutes which is not fully met by the other and newer phases of extension or county agent work.

No new developments or changes occurred either in the conduct or in the management of farmers' institutes during the year. The extension division of the college of agriculture in each State had complete charge of farmers' institutes, except in Iowa and Maine, where control was vested in the State department of agriculture, and in Illinois, where a State department of farm institutes conducted all such activities. In these three States, however, there was no duplication of effort or distinct or independent line of instruction, since in each of these States the work was carried on in cooperation with the organized extension service at the college of agriculture and the agricultural, home demonstration, and club agent work in the counties, the activities of which were supplemented, reenforced, and supported.

INSTITUTES CONTROLLED THROUGH STATE DEPARTMENTS

In the three States where farmers' institutes were directed and managed by the State department there were held in 1929, 482 institutes, lasting 1,008 days and having 2,619 sessions and an attendance of 245,192 persons. The instruction was given by 414 persons, of whom none were members of the extension service but 37 were from experiment-station staffs, 12 were from the personnel of State departments of agriculture, 147 were mostly farmers and farm women engaged because of noteworthy accomplishments on their own farms or in their own homes, and 218 were lecturers from other sources. The total cost of these institutes was \$59,273.51, derived from special State appropriations for the purpose amounting to \$36,659.65, and \$22,613.86 contributed by farmers and other local people in the neighborhood of the institutes.

In comparison with the previous year's report of farmers' institutes conducted by State departments, the report for 1929 showed a decrease in the number of institutes, attendance, and amount of money expended, but an increase in the number of days institutes were held and the number of sessions.

INSTITUTES CONTROLLED THROUGH COLLEGES OF AGRICULTURE

The eight States conducting farmers' institutes under the direction of the colleges of agriculture held a total of 2,118 institutes, which lasted 2,933 days, included 6,410 sessions, and were attended by 1,021,292 persons. They employed 315 instructors, of whom 85 were members of the extension force, 23 were from experiment-station staffs, 15 were from the personnel of the State departments of agriculture, and 192 were from other sources, mostly farmers and farm women hired for the purpose during the institute season. The cost of these institutes was \$108,358.45. Of this amount \$70,739.62 was derived from State appropriations for the purpose, and \$37,618.83 from other sources, mostly local contributions by farmers and others in the regions where the meetings were held.

In comparison with the previous year's report of farmers' institutes conducted by the colleges of agriculture, the report for 1929 showed a slight increase in the number of institutes, but a slight decrease in the number of days, sessions, and attendance, and money expended.

STATES HOLDING FARMERS' INSTITUTES

The 11 States in which farmers' institutes were conducted in 1929 held an aggregate of 2,600 institutes, extending over a period of 3,941

days and including 9,029 sessions, at which a total of 1,266,484 persons were in attendance. The instruction at these institutes was given by 729 persons, of whom 85 were members of the extension force, 60 were from experiment-station staffs, 27 were from the personnel of the State departments of agriculture, and 339 were from outside sources. Those from outside sources were mostly actual practicing farmers and farm women selected and hired during the institute season because of their success and reputation for having actually done the things on their own farms or in their own homes under normal conditions, as well as for their ability to tell others how they did it. Farmers have confidence in and appreciate such instruction. The cost of these institutes was \$167,631.96, of which \$107,399.27 was from State appropriations for farmers' institute work and \$60,232.89 from local contributions.

In comparison with the previous year's report of farmers' institutes conducted by both State departments and colleges of agriculture, the report for 1929 showed a slight increase in the number of institutes held, the number of days institutes were held, and the number of sessions, but a slight decrease in the number of persons in attendance and in the amount of money expended.

ECONOMIC RESULTS

SOIL IMPROVEMENT

Soil-improvement work centered during 1929 around four major projects—the use of fertilizers, lime, and green manure, and the use of cultural methods in handling soils and their control.

FERTILIZERS

Work with fertilizers was reported from 30 States. As in the past, this work was concerned largely with the better use of high-grade fertilizers. In some instances it took the form of developing formulas for home mixing and using the information in winter meetings and demonstrations. In other States there was cooperation with fertilizer interests in developing standard formulas for the use of high-analysis fertilizers and in reducing the number of formulas of the fertilizers offered for sale by commercial agencies.

During the last two or three years commercial agencies have developed more than ever in the past a field force for the demonstrations of their own fertilizers. In most instances this work was carried on in a way that was a real help to the extension service. Men trained in agronomy were hired for the work, and most of them had had extension experience. Almost without exception they were careful to make their field contacts with the proper extension agencies and to carry on their demonstration work in conformity with the recommendations of the local experiment station. In most instances, the demonstration work carried on by fertilizer agencies not only demonstrated their own material but used the various fertilizing ingredients in a well-balanced program.

An example of the work with commercial agencies was that conducted by John B. Abbott, of the National Fertilizer Association, who carried on in the New England States a series of pasture-fertilization demonstrations. These were put on in cooperation with the local county agents in the various States. Care was taken to fence the

demonstrations or at least parts of them so that reliable records could be kept. Probably no one thing has done more to arouse interest in pasture improvement in New England than the work that Mr. Abbott has carried on.

LIME

Work with lime was reported from 28 States. This activity consisted not so much in demonstrations that showed the value of lime as in helping farmers to procure supplies of lime more easily, by means of better freight rates, local lime bins, community crushers, and combined carload shipments. A new phase of the lime program has been developed during recent years in Illinois. It is a program for mapping the entire farm on its lime-requirement basis and has been made possible by the improved methods of testing soil for lime requirements. In this program the county agent, cooperating with the soil specialist, held a series of schools for training project leaders in soil testing. The men were carefully trained in methods of taking samples, of testing these samples for acidity, and then of mapping the fields to show the various percentages of lime required. Usually about 40 samples were taken of a field of perhaps 35 to 40 acres. The men then went back to their own communities, not only to map their own farms for lime requirements but to help to train their neighbors in mapping soils.

The advantages of using the project-leader method of testing soils are illustrated in the report from the two counties in Illinois. One county agent reported that during the year, by making individual tests for farmers, he had been able to map 1,980 acres of land, showing the lime requirement. In an adjoining county where the soil-testing project was carried on through project leaders, 1,900 acres were tested for lime requirements at one afternoon's meeting, and as a result of 19 half-day meetings, 11,000 acres in that one county were tested for lime. To show the advantage of mapping the land for lime requirement, the report from one area is presented:

Condition of soil:	Acres
Sweet.....	546
Slightly acid.....	1,046
Medium acid.....	474
Strongly acid.....	233

Because of the tests, the farmer can apply lime at the rate that is needed and not waste lime on land that is sweet and needs no application. As a result of the well-organized lime program in Illinois, the quantity of limestone used has steadily increased from 122 tons in 1906 to 900,000 tons in 1929.

GREEN MANURE

Work with green manure was reported in 22 States in all sections of the country, especially in the South. This project was actively carried on in every one of the Southern States, where the use of vetch and other hardy winter-growing legumes is becoming universal. The reports from Georgia and Alabama illustrate the extensive use of a winter legume as a green-manure cover crop. In Georgia 90,500 acres of winter cover crops were reported to have been plowed down for soil improvement, including 50,500 of winter legumes and 40,000 acres of rye. An additional 27,545 acres of various legumes was

seeded for hay and pasture. In Alabama, 56,355 acres of vetch was seeded for winter cover crop in 1928, and 97,844 acres in 1929. Each year in Alabama a special campaign is carried on to interest people in the seeding of vetch for green manure, aided by the distribution of vetch seed through the local farm bureau organizations and resulting in the widespread use of vetch as the winter legume.

HANDLING OF SOIL

The handling of soil, including rotations and tillage, terracing, irrigation and drainage, and control of moisture, was an important phase of soil improvement which received attention from the agronomy specialist in 1929. Reports from 24 States covered work on rotation and tillage, 9 States reported work on terracing, 2 States reported work on irrigation and drainage, and 4 States—Arizona, Kansas, New Mexico, and Utah—reported work on conservation of moisture.

FIELD CROPS

During 1929, the agronomy work was carried on in 43 States with 97 specialists. Five States—Delaware, Rhode Island, Florida, Mississippi, and Nevada—had no specialists in this line of work. However, in each of these States some one in connection with the supervisory work, usually vice director or county agent leader, handled the special work in agronomy.

Of the 97 specialists in 43 States, 84 were on a full-time basis and 13 on a part-time basis. Twenty-three States had one specialist each, 7 States had 2 specialists each, and the other 13 States had three or more, the largest number being in Michigan, where 11 specialists covered the soils and crop program. In that State, however, the program included not only grain, field crops, and legumes, but also potatoes and sugar beets.

CROPS EXTENSION WORK

During 1929, as in previous years, the crops program was centered largely around feed production and seed improvement, the two being so closely associated that in most States they form one big project—that of feed production—either for the use of livestock on the farm or to be sold as cash crops.

The feed-production program was divided into pastures, grain, and forage crops. During 1929 there was an increased interest in pasture improvement. This work was carried on in 33 States, in most of which it was one of the major projects. The fact that Kentucky reported 758 pasture demonstrations, Pennsylvania reported 161, and Massachusetts 67, indicates something of the interest taken. In the New England and North Central States the pasture program was concerned largely with fertilization and reseeding, whereas in some of the South Central and some of the Western States, it included seeding temporary and permanent pastures with the improved grass mixtures and reseeding old pastures with sweetclover and other leguminous grasses for summer-feed production.

In the forage-crop program, it was reported that projects on general hay production were carried on in only 18 States, but that work with legume crops was general. Demonstration work was carried on with alfalfa in 40 States, with sweetclover in 30, soybeans in 18,

Lespedeza in 11, and clover, principally red clover, in 19. Work with miscellaneous crops, such as vetch, field peas, velvetbeans, and peanuts, was reported in 10 States.

ALFALFA

Alfalfa continued to forge ahead as the leading legume crop, although there were not so many demonstrations as in other years. The work with alfalfa in 1929 was largely in the production of improved seed and in campaigns to see that farmers were obtaining the seed best adapted to their conditions. (Fig. 22.) This program was helped materially by the seed-certification work carried on in the Western States and Michigan and by the verified-origin work carried on under

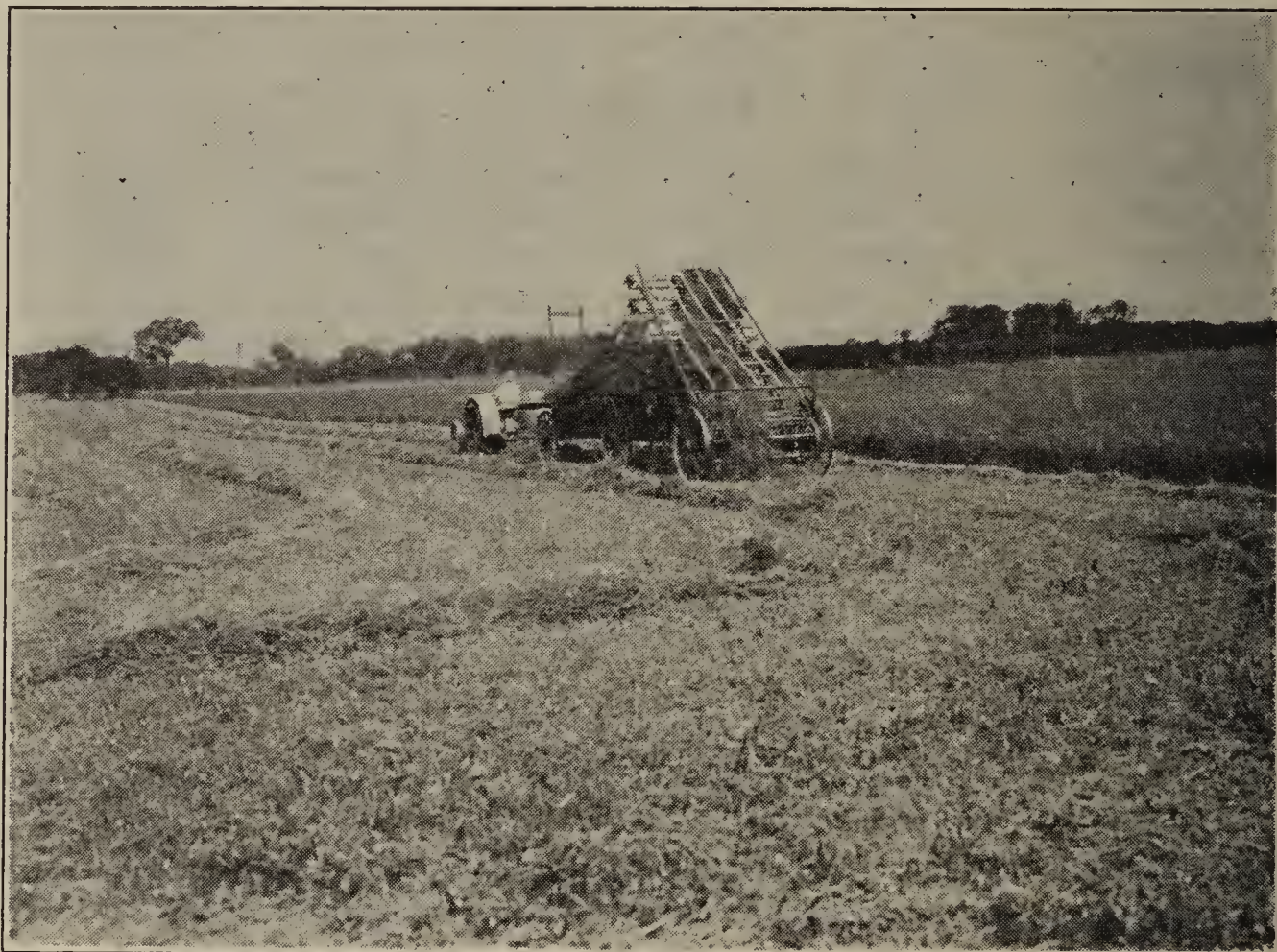


FIGURE 22.--An alfalfa demonstration field

the Bureau of Agricultural Economics, United States Department of Agriculture. It became possible for any farmer to know definitely the section of the country in which his alfalfa seed had been grown, and it became more difficult for dealers to sell seed of unadapted strains. This condition made it possible for the States to go ahead with a strong alfalfa-production program and to feel reasonably sure that the results of their work would not be lost through the use of poor seed.

SWEETCLOVER

Sweetclover was used mostly for two purposes: As a pasture crop—especially in the North Central States, where it was used for seeding temporary pastures and reseeding old pastures—and for a soil-improvement crop in almost all States.

SOYBEANS

Soybeans increased in acreage, especially in the North Central States, such as Illinois, Indiana, and Ohio. Since 1927 there has been a strong movement to make a cash market for soybeans. Up until that time soybeans were used almost entirely for reseeding purposes or for hogging-off in the field. Through the efforts of some of the extension agronomists in the Middle West, there was developed in 1928 and 1929 a sound cash market for soybeans, most of them being grown under contract with a definite minimum price guaranteed. This system put the soybean crop in the Middle West on much the same basis as the grain crops, and the indications are that it will more and more take the place of oats as a feed crop in that section.

LESPEDeza

Work with Lespedeza continued to develop rapidly. It proved to be one of the best feed and hay crops in the section from Kentucky, Tennessee, and Virginia on south. Farmers used not only the common Lespedeza which grows wild in many of these sections, but a great deal of work was done with the improved varieties, especially with Korean, Kobe, and some of the native kinds that have been developed in Tennessee and one or two other sections. Methods of harvesting and saving seed have been improved as the crop has increased in popularity, and the people began to understand more of the value of this crop and how it could best be used. One serious difficulty in connection with the distribution of Lespedeza seed was that in some sections dodder had been allowed to develop until it was difficult to find seed that was free from this weed.

CLOVER

Work with red clover continued to be of importance in a number of States. The great difficulty was to procure enough seed of good quality to meet the demand. Plans for red-clover seed production were further developed to make available a seed supply for general distribution on much the same basis that the improved strains of alfalfa seed were distributed. It is possible to produce large quantities of red-clover seed in the West, and this production is increasing in such areas as Colorado, Idaho, and other high mountain-valley sections. One of the most prolific sections for clover-seed production is the Pacific Northwest. However, because of a mixture of undapted strains getting into that section, the seed produced on the Pacific coast is no longer well regarded in the North Central and Northeastern States. The impression exists that the seed is not hardy enough for growing in the Northern States because it has been grown in the temperate Pacific coast section. The difficulty, apparently, is largely one of variety rather than of the section in which the seed is grown. Plans were made in 1929 for obtaining hardy strains of known origin in the Central States, especially Ohio, Michigan, and Illinois, to be grown in the northwestern coast section of Washington and Oregon for redistribution in the Central States.

SEED IMPROVEMENT

Seed improvement continued to be one of the most important projects in agronomy, as it was used as the basis for crop standardization in many States. The extension agronomists are coming to realize that their time is wasted in encouraging farmers to improve crop conditions unless they also see to it that reasonable amounts of good seed are made available for use. The principal crops that received attention in the seed-improvement program were corn, wheat, oats, barley, and rye, with alfalfa as a special crop in the States of North Dakota, South Dakota, Montana, Wyoming, Idaho, and Utah.

Seed-improvement work with corn was reported in 35 States. In most of these States reports indicated that there was sufficient certified corn available, either direct from the certified field or only one or two years removed from certification, to supply every farmer in the State who desired improved corn. In connection with the corn-improvement work, an increased interest in the 5 and 10 acre corn contests was reported. Such contests were reported from Indiana, Michigan, Nebraska, Kansas, Georgia, and South Carolina, and 100-bushel corn club contests were carried on in Kentucky. These contests not only emphasized the value of good seed but were also used as a basis for demonstration work in seed production and the best cultural methods.

Seed-improvement work with small grains was reported as follows: With oats in 35 States, with wheat in 32 States, with barley in 26 States, and with rye in 12 States. In a majority of States where small grain was being handled cooperatively by seed-improvement associations it was possible, as it was with corn, to supply any farmer desiring improved seed with the best adapted seed that could be grown, and this seed was used as a basis for the crop-improvement program in the State. An illustration of the value of this work may be found in the situation in eastern Montana, where, in 1929, in one county during a day's drive of some 150 miles, the Federal extension agronomist found only three fields of mixed wheat. In discussing wheat production with a representative of one of the largest flour mills in Minneapolis, the agronomist was told that the mill could buy whole trainloads of wheat from eastern Montana and be sure that it was getting high-quality wheat free from mixtures. When the seed-improvement program can reflect itself on the market quality of wheat in this way, it is reaching its intended goal.

SMUT AND WEED CONTROL

During the last few years the work of control of grain smuts has been carried on more in cooperation with the seed-improvement program. In 1928, 21 States reported work in the control of smut in connection with their crop-improvement program, and in a number of States where there was no extension pathologist the work was carried on by the extension agronomist as a part of his regular program.

Weed control is becoming one of the important projects, and was reported as an active line of work in 21 States in 1929. In 18 of the 21 States weed control by means of chemicals was reported. This work during 1929 was greatly increased because of the activity of commercial firms in the demonstration and use of chemicals for the

control of noxious weeds. In all but one of the Western States weed control was one of the principal projects, and not only cultural methods but chemicals were used in the control of weeds. Irrigation is one of the most serious sources of weed distribution, and the farmers have been quick to recognize the value of chemicals in the control of weeds along ditch banks and in irrigated areas.

SPECIAL CROPS

Potatoes were reported as an active agronomy project in 17 States. In some of these States the work was carried on by potato specialists in the agronomy work; in others it was carried on by the regular extension agronomist as a side project along with other crops. Cotton-improvement work was reported in 10 States and tobacco work in 7. In all these States, with cotton, tobacco, and largely with potatoes, the work was along the line of seed improvement.

Some work was carried on in North Carolina, South Carolina, and Georgia on the improvement of cottonseed. Surveys indicated that in these States not more than 25 to 33 per cent of the cotton used in the mills was produced locally. The mills were using long-staple cotton of from 1 to 1½ inch, and most of the cotton produced in these States in the past had been short staple. This fact made it necessary for the mills to ship in their long-staple cotton from Mississippi, Texas, or other States farther west, and the local short-staple cotton was largely exported at a much lower price than the long-staple cotton would bring. Active campaigns for the production of improved seed of the longer staples were carried on in all these States, and reports indicated that excellent results were being obtained.

CLUB WORK

In December, 1929, a special conference of club leaders and agronomy specialists was held to work out some principles that would be of use in increasing interest both in club work among agronomy workers and agronomy work among club leaders. Reports indicated that in 1929, 21 States did active club work with crops.

HORTICULTURAL CROPS

The horticultural extension work grew faster than trained men could be found to fill the positions available. The railroads and fertilizer firms took several of the extension horticultural men during the year. The two lines which expanded the most were home gardening and landscape work. These activities were largely taken over by home demonstration agents, particularly in the South, and throughout the country the farm women did more home gardening and yard improvement than the men. In some States the 4-H clubs did considerable home-garden work and some fruit work. The fruit, vegetable, and nut work made a good, healthy growth. The public called for more help than the forces available could possibly give.

NUMBER OF SPECIALISTS AND LINES OF WORK

The number of specialists increased from 96 in 1928 to 102 in 1929. Of these, 75 were on full-time and 27 on part-time work.

The States having the most specialists were New York and Ohio with 8 each, Pennsylvania and Michigan with 6 each, and Iowa and

Virginia with 5 each. Florida, Maine, Rhode Island, New Mexico, and Wyoming each had only 1 specialist on part time.

Since the fundamental practices in horticulture do not change much from year to year the same lines of work were continued in 1929. In fruit growing, orchard management included culture, fertilizing, cover crops, pruning, fruit thinning, spraying, rodent control, and top grafting. Spray rings and spray-service work increased. Considerable crop-cost accounting was done, and grading, packing, and marketing received more attention than ever.

The work with vegetables included the use of certified seed, glass-houses for growing plants, earlier planting of canning-crop tomatoes, standardized grades and packs, selection of better varieties, better equipment and remedies in insect and disease control, more intelligent use of fertilizers, improved marketing methods, planting and care of gardens.

With nut crops the work centered around better culture and fertilizing, including cover crops, top-working seedlings and poor varieties, pruning, and disease and insect control.

The landscape work included the making of lawns, arrangement and planting of shrubs and trees, making flower beds, use of bulbs, and in general the beautifying of homes, schools, churches, public buildings, cemeteries, parks, automobile camps, and State and county highways.

CERTIFIED SEED POTATOES

A good example of the results of extension teaching in the use of improved seed was reported from Louisiana. In 1924 the State farm bureau ordered 13 cars of certified Triumph seed potatoes. The orders by the State farm bureau increased to 81 cars in 1927, then decreased to 37 cars in 1929 because seed dealers and northern growers of certified Triumph potatoes sold direct to planters who had learned the value of certified seed through the teaching of the extension service. In 1929 between 200 and 250 cars of certified Triumph seed were planted in Louisiana.

CERTIFIED BEAN SEED

The bean growers of the Southern States have long wanted healthy seed beans but have not been able to procure them in large quantity. The extension service of Louisiana studied the situation, and in 1928 arranged with the horticultural department of the State agricultural college of Colorado to supervise the growing and to certify the freedom from disease of Giant Stringless Green Pod bean seed. Contracts were entered into between the Louisiana State Farm Bureau and selected bean growers in Colorado for three carloads of certified seed. Sixty thousand pounds of seed was threshed, but the threshing machine was so poorly adjusted that two-thirds was split and only 20,000 pounds was usable for seed. This seed was shipped to Louisiana in December, 1929. Thus the beginning of a big new industry should be credited to horticultural extension service.

PLANT-GROWING STRUCTURES

A great impetus has been given vegetable growing by the introduction of sash houses or glasshouses for the growing of early vegetable plants so that they will be large and stocky when the weather is warm

enough for them to be set out. In Pennsylvania plans for 190 of these glass structures were sent out in 1929, but there is no record of how many were actually built. There were about 500 in the State.

In Connecticut 65,670 square feet of sash houses and greenhouses were built during the year as a result of extension work. Connecticut also had about 500 of these glass structures for vegetable plant growing. New Jersey featured them, too, but not so extensively as the other two States.

HOME GARDENS

There were more calls for help in connection with home gardens than for anything else except home-landscape improvement. Many of the vegetable specialists cooperated with the home agents and nutritionists, and through the activities of the women's clubs and junior



FIGURE 23.—A farm woman cultivating her vegetable garden under the direction of an extension agent

clubs the number of home gardens increased by thousands, not only summer gardens but also "all-year" gardens. (Fig. 23.) Demonstrations and club gardens, mostly carried on by women and girls, numbered 15,868 in Texas, 12,004 in Mississippi, 10,788 in South Carolina, and 6,130 in Alabama. Of these 9,821 were all-year or winter gardens. In South Carolina complete records were kept of the yields of 231 gardens averaging half an acre in size. They produced sufficient vegetables to feed 1,297 people (207,572 family servings), and to fill 33,780 quart cans besides a surplus which sold for \$21,354.37.

LANDSCAPE BEAUTIFICATION

Nothing in horticultural extension work grew faster than the beautification of home grounds, school and church grounds, cemeteries,

parks, and roadsides. The home agents fitted into this work admirably and carried on large numbers of demonstrations. In Missouri 2,620 homes of white people and 1,500 homes of negroes were beautified, and the white people adopted 16,590 practices on the grounds around the 2,620 homes. In South Carolina the women beautified the grounds of 1,243 homes and the club girls 2,861. The grounds around 78 churches and 114 schools were made more attractive, and 47 miles of highway roadside were beautified, making a total of 214 miles of roadside improved in South Carolina in three years. There were 1,457 home grounds and 184 school grounds planted to a plan, and 6,743 other home grounds beautified in some way in Mississippi. In Nebraska 867 plans were made, and 2,790 homes were improved by plantings. More than 7,000 women took some training in landscape work in South Dakota, and 1,208 home grounds were beautified. In Georgia 1,443 home and school grounds were beautified in 1929.

COST ACCOUNTING

In California cost-accounting studies in orchards and vineyards were continued. Studies were made in 307 almond and Persian walnut orchards; in 318 orchards of apples, pears, peaches, prunes, apricots, and cherries; in 77 orchards of oranges, lemons, and grapefruit; and in 93 vineyards. Studies in peach production were made in Kentucky and Georgia.

One of the outstanding pieces of cost accounting is that of home gardening in South Carolina where complete records of growing and using garden crops were made, as mentioned under Home Gardens. This work was done in cooperation with the home demonstration agents. A book of 12 printed record blanks, originals and carbons, one for each month, was sent to each gardener. Each time a vegetable was served a mark was made on the line containing the name of the vegetable. A record was also made of each sale of vegetables and all canning done. At the end of each month the record sheet was sent to A. E. Schilleter, the extension horticulturist at Clemson College, and the gardener kept the carbon copy. After all twelve monthly sheets were in, the results for the year were tabulated. Monthly garden letters were sent to all gardeners, and meetings were held in some of the best gardens. Visits were made to all the gardens from which the best monthly reports were received.

Another excellent example of cost accounting is that given under Sweetpotatoes.

SWEETPOTATOES

The sweetpotato work in South Carolina was conducted as a contest in which complete records of the cost of production were kept by 170 growers, and the awards of prizes were made on the yield of United States No. 1 grade grown by each contestant. To have a fair basis for deciding who were prize winners, the extension horticulturist and those helping him dug 50-foot pieces of five rows in different parts of the field and graded for yield of the United States No. 1's. The owners dug and graded the rest of the field, but their results did not figure in selecting the prize winners. There were 292 growers who started this project, but 122 of them dropped out. At meetings and in circular letters complete instructions were given

on the bedding of tubers to grow healthy plants, the preparation of the land, setting of plants, fertilizing, cultivating, and finally the grading of the crop into United States standard grades. Field meetings were held in the potato fields during the summer.

FORESTRY

Farm-forestry practices gained in 1929 through cooperative extension efforts. Improved practices were adopted on 21,350 farms. Of these, 3,954 farms carried on better forestry practices for the first time.

During 1929 there was an increase in the number of States and Territories cooperating under section 5 of the Clarke-McNary Act. Utah, Oklahoma, Hawaii, and Porto Rico began the work during the year, making a total of 32 States and 2 Territories. These States carried on definite projects in forest planting, improvement cutting, timber estimating, fire prevention, and 4-H club work in forestry. Some emphasis was given to marketing, sawmill improvement, and maple-sirup production.

Management of farm woodlands so that they would bring the fullest returns to the farmer was an important part of the program in the timbered States. This work constituted a project on 6,013 farms in 1929, and a total of 241,459 acres was involved. The 5,334 farm-forest plantations established during the year through the efforts of extension foresters added 25,932 acres. In addition, 3,088 farmers planted windbreaks.

The number of 4-H club members engaged in forestry projects increased in 1929 1,577, making a total enrollment of 5,608. Forestry activities were carried on by 4-H clubs in 23 States, with New York, New Hampshire, New Jersey, California, and Wisconsin, leading in number of members enrolled. Such events as 4-H camps, contests, club weeks, pageants, demonstrations, posting fire signs, hikes, rallies, tours, and field days were used successfully in stimulating interest among the boys and girls. Practical lessons to apply on the home woodlands were taught in most of the States. This work has been drawing the interest of an increasing number every year, and a greater number of completions are also being recorded. The forestry 4-H club project during 1929 yielded greater results than had been expected and became the most active program of the year.

CROP-INSECT CONTROL

Extension work in entomology was carried on in practically every State in the Union. Full-time subject-matter specialists were employed in 18 States, and entomologists devoting part of their time officially to extension work along this line functioned in 7 States. Four States employed 3 full-time men, and two other States employed the equivalent of 2 full-time men in this work. There were, in all, the equivalent of 33 full-time men acting as subject-matter specialists in entomology in this country.

Timely information service was one of the most successful lines of extension work in entomology. Examples of this work were the orchard-spray services of such States as New York, Pennsylvania, West Virginia, Maryland, and Ohio, where the subject-matter specialist, through field observers, was kept informed daily as to the progress in the development of the more important orchard pests. Through telephone relays and other means of immediate communications, he

notified the orchardist in person of the exact time that certain remedial measures should be applied to be most effective that year.

The work in the South centered around the control of the boll weevil, and this work progressed so well that in some of the Cotton Belt States, a large part of the acreage in cotton was successfully treated. Extension work in entomology in the New England States was almost exclusively incidental to horticultural work, and these States employed no subject-matter specialists except in apiculture. In the Middle Atlantic States the work was largely centered around orchard and truck-garden insects. In the East Central, North Central, and West Central States, the Hessian-fly problem and work on other insects attacking the cereal and forage crop predominated in the work of the extension entomologist. In some of these States, however, orchard work also assumed a major place, particularly in the East Central States. In the Rocky Mountain region and the Great Basin, grasshopper and army worm control and considerable work on deciduous-fruit insects were included in the extension programs in entomology. In the Pacific Northwest deciduous-fruit work received the major part of the entomologist's time.

After the discovery of the Mediterranean fruit fly in Florida, a large amount of the time of the extension entomologist in Louisiana was devoted to inspecting the shipments of Florida fruits to various points in the State. The chief problem in Louisiana was boll-weevil control. The cotton-dusting program was highly successful. The sale of over 5,000,000 pounds of insecticides during 1929, as compared with 2,500,000 pounds in 1928, was the most tangible indication of the increase in this work. During the farmers' short course the extension entomologist gave lectures and put on demonstrations before the students. During the season the extension entomologists attended nine meetings, the attendance at which was 650. Fourteen demonstrations other than cotton dusting were staged, which 410 persons attended. The beekeeping work in this State is under a specialist in apiculture. The extension beekeeper visited 124 beekeepers and assisted in introducing 180 purebred adult Italian queens. He visited 59 schools and gave lectures to over 8,000 school children on the life of the honeybee, and to stimulate interest in beekeeping, he attended 21 meetings of adults at which the attendance was approximately 2,000.

A review of the rather fragmentary statistical summaries of the subject-matter specialists in entomology shows that the average worker spent 123 days in his office, where he answered about 800 letters, prepared 50 press articles and 5 circular letters, and wrote 2 extension bulletins in addition to his routine office work and report writing. He spent 155 days in the field, in which time he visited 290 farmers personally, put on 78 demonstrations, and delivered 39 addresses before audiences that averaged 80 persons each.

RODENT CONTROL

The rodent-control work carried on by the Bureau of Biological Survey was so closely interlocked with agricultural extension activities along this line that it is difficult to separate that part of the work conducted in direct cooperation with the extension service from the total rodent-control activities of the bureau. This report, therefore, covers the entire work of the Biological Survey in rodent control.

Organized rodent-control operations were carried on during the year under the leadership of the Bureau of Biological Survey in 27 States, and educational work in 5 others. Although these operations were conducted largely in the Western States, the East was not neglected. In the field work, 3,718,000 pounds of poisoned bait, 106,000 pounds of calcium cyanide, and 411,000 pounds of carbon disulphide were used in controlling the rodent pests on 19,425,000 acres of land. Of the strychnine used in preparing bait, 75,000 ounces were purchased through the bureau from the manufacturers at a saving to cooperators of approximately \$40,000. This saving allowed more extensive use of the cooperative funds available.

The Biological Survey, which was responsible for leadership in rodent control, enlisted, in conjunction with agricultural extension workers, the cooperation of many thousands of farmers and other landowners. Farmers are coming more and more to realize that losses from rodent pests need not be tolerated. The eagerness with which more than 99,000 farmers during the year availed themselves of the opportunity to obtain relief from rodent pests through cooperative action was significant and gratifying. This cooperation resulted in the destruction of certain rodent pests on millions of acres of valuable agricultural land and was attended by an enormous direct saving and by increased production of important crops.

Data compiled at the close of the year showed that since the inception of this work by the bureau, rodent pests had been eradicated on 14,300,718 acres of land, or brought under control there to such an extent that no damage from them was sustained.

LIVESTOCK

DAIRY CATTLE

At no time in recent years was so much time and constructive effort expended in the development of well-rounded dairy extension programs as in 1929. At the end of the year, there was still room for improvement, but the problems facing the industry were being studied more closely, and the program was being so developed that it would meet the immediate situations and at the same time fit in with the long-time development program intended to reach the greatest possible number of dairymen.

The dairy extension programs in the past centered generally around four main lines of effort: (1) Better breeding, (2) better feeding, (3) testing, and (4) 4-H dairy clubs. During 1929 the programs in several States were rounded out by the inauguration of definite projects with both adults and 4-H club members on the improvement of the quality of milk and cream. This activity was an advance step carried out with the proper use of modern extension methods and was expected to reach a large proportion of the dairymen and result in marked improvement in the quality of the product.

The great market milk shed territory in the East was faced with the possibility of a shortage during the fall and winter months of 1929, and extension programs were changed to meet the problem. The fact that there was no milk shortage may or may not have been the direct result of the extension projects, but it is safe to say that they played a part in preventing a shortage.

During the year much attention was given to pasture improvement. A factor of great importance was the active interest of investigators in pasture problems. In many areas it was found that the substantial development of pastures, so fundamental to successful dairying, would have to await the results of experimental work.

As the most practical and rapid way to solve the problem of low-producing cows, extension agencies advocated the introduction of purebred dairy bulls. The outstanding method of this introduction was the cooperative bull association. In 7 Southern States on December 31, 1929, there were 127 such associations, containing 4,025 members who owned 573 bulls and 20,360 cows. Bull campaigns and bull auction sales were other methods given prominence. Catawba County, N. C., completed the eradication of all grade and scrub dairy bulls. Gaston County in the same State, did likewise and had signs posted on highways advertising the fact.

Dairy-herd-improvement associations made progress in the South. These associations were cooperative organizations of dairymen for the elimination of poor cows, improvement of feeding methods, and other means of herd improvement. Since systematic records were kept by most of the associations, a specific measure of results was afforded. In 11 Southern States there were 80 associations representing 1,460 herds and 35,942 cows. Seven associations in Texas are not included in the 80 associations mentioned, since complete data regarding cows and herds were not available.

Better breeding received much attention. In addition to the regular extension work on this phase such as cooperative bull associations and sire campaigns, a newer specialized method that offered real promise was the proved-sire program, which was closely allied with the testing done by the dairy-herd-improvement associations.

BEEF CATTLE

One of the popular lines of work with beef cattle was the herd demonstration in which breeding, feeding, and management practices were taught. Most of the effort was directed toward the production of baby beeves. Many steer-feeding demonstrations both in dry lot and on pasture were conducted as a help to those who purchase their feeding cattle. In the range area proper management of animals and range was one of the major activities. Supplemental feeding, feeding for market, culling, and selection of breeding stock also received considerable attention. Consideration was given to certain marketing problems which were closely allied to production, such as efforts to expand the marketing season.

SHEEP

Such practices as the use of good purebred rams, creep feeding of lambs, treatment for stomach-worm infestation, docking and castration of lambs, proper winter feeding and care of the breeding flock, and grading for market, all had preferred attention in the farm States. Culling of the breeding stock, supplemental feeding, and proper range management were emphasized in the work in the range States. In those areas of the West where surplus feeds were available the feeding of lambs for market was a leading demonstration activity.

SWINE

Work in this field continued to be one of the popular activities of animal husbandmen. The use of protein supplements and legume pastures and the control of internal parasites were among the practices on which effort was expended. The ton-litter work maintained its appeal, and 597 ton-litters were officially reported, as compared with 492 the previous year. The swine-sanitation work, originally confined largely to the Corn Belt, spread to other areas, especially to the South.

WORK STOCK

Activities in demonstrating the value of big-team hitches showed considerable increase during the year. Most of the demonstrations took place in the Central States, although some interest was shown in other sections. The only other important work in this field consisted of colt, stallion, and gelding clubs, which were promoted in several States.

GENERAL

Work with juniors continued to occupy as much of the animal husbandmen's time as in previous years, or even more, although most of their contributions were those of a subject-matter nature.

The tendency for project leaders to consult and actively cooperate with leaders of other projects allied with the animal-husbandry field, which had been evident for several years, continued to grow.

The new wealth of data on the subject of ranch organization and management attracted the attention of animal husbandmen in the range areas and resulted in definite efforts to put this information to use in the building of extension programs.

POULTRY

The poultry producers had a favorable year in 1929. The flush production of the spring started relatively late and brought an exceedingly good demand and a good price for baby chicks. With egg consumption at a high level, a favorable price was maintained throughout the spring storage season. The late crop of pullets caused a favorable price level in eggs to be maintained during the fall and winter months. The extension poultrymen emphasized the system of flock management whereby pullets would come into production in the early fall months and, in 1929 in particular, the farmers who followed this recommendation had very satisfactory financial results.

After the disastrous stock-market crash in October, the price of turkeys and dressed poultry was reduced. At the relatively low price a large number of turkeys were sold, and American families who heretofore had not had turkey meat at the Thanksgiving or Christmas season purchased freely. Even with the lower price many of the turkey demonstration farms were able to show a profit, and the extension poultrymen used the lower price level as an argument toward more efficient turkey methods which had only recently been evolved.

USE OF ECONOMIC MATERIAL

The use of economic material and the need for more basic information in regard to the poultry industry and poultry production costs were brought out markedly in conferences of the poultry specialist during the year. More attention was given to census material,

rural statistics, such as county assessors' reports, and demonstration farm-flock records. The number of States carrying demonstration farm-flock extension projects increased. The specialists found that the data gathered gave them useful material, and the study made by the flockowner caused him to be more efficient.

CULLING

In past years one of the major activities of the county extension workers and State specialists has been to emphasize the culling or elimination of the low-producing hen. This feature of the work, which was introduced by the extension organization, was carried on in 1929 by the farmers themselves and by flock-improvement associations in a large number of the important poultry-producing States.



FIGURE 24.—County agent giving a culling demonstration

The activities of these associations were usually connected with the hatchery industry, but their culling work was on a self-supporting basis and supplanted many of the free demonstrations formerly given by the extension workers. (Fig. 24.)

POULTRY EXTENSION WORK BY COMMERCIAL AGENCIES

Another trend in poultry extension work was the establishment of service by commercial interests. In some sections of the country, particularly California, the service man has been an institution for a number of years, but only in 1928 and 1929 did such organizations as produce houses, hatcheries, and commercial feed concerns turn their attention toward this phase of education. Service and promotion departments were established by a large number of such industries. Practically all these service men seemed to work in harmony

with the county and State extension organizations. Many of these men were recruited from the extension service, and although they were not interested in education exclusively, much advantage was gained by their proper coordination of the items which these commercial organizations recommended. The service men constantly turned to the United States Department of Agriculture and the State agricultural colleges for information on poultry.

A good example of cooperation with commercial organizations was the production of two much-needed films relating to chicks. The commercial hatcheries banded together and organized an advertising campaign fund which was to be spent toward the promotion of the use of baby chicks. A portion of this fund was appropriated to the Department of Agriculture for use in creating these films. A hearty response followed from the extension workers who used these pictures.

4-H POULTRY CLUBS

The 4-H poultry club work took definite steps forward in 1929, especially in regard to national contests. A demonstration team contest was established at the National Poultry Show in St. Louis, and a 4-H club poultry judging contest was established in connection with the International Livestock Show in Chicago. No attempt was made at either of these two places to hold a poultry club show, but in time this development may be brought about. The poultry show and judging contest for the Eastern States in connection with the Madison Square Garden Poultry Show in New York City was continued.

CHICK SANITATION

One of the serious problems in poultry production was disease prevention, which was attacked in a number of States under the heading of chick-sanitation campaigns. In these educational campaigns various slogans were used, such as "grow healthy chicks," "produce paying pullets," and "wage war on worms," but all the campaigns had the same fundamental principles of showing prevention rather than cure. The programs were organized by the State extension workers and in some instances carried to every county in the State. One outstanding feature in the campaigns was the development of a variety of means and agencies in order to reach a large number of poultry raisers.

The first issue of the Extension Poultry Husbandman, which was intended as a house organ among the poultry specialists, was devoted to the subject of chick sanitation. This publication included four life-cycle charts, which were worked out by the extension office in cooperation with other branches of the Department of Agriculture.

A sanitation committee composed of representatives from 14 national poultry organizations held two sessions and did much to promote poultry sanitation. This committee planned to meet from time to time and bring special stress to the subject of disease prevention.

An example of an unusual method can be cited from Wisconsin. The poultry specialist found that feeding the proper ration to growing chicks was handicapped because of lack of equipment. A suitable mash hopper was designed by the poultry staff, and illustrations and blue prints were distributed. However, even this did not make the

mash hoppers available for the chicks, so a factory operator who normally manufactured boxes was interested in the project and he was able to make the pieces and supply the parts necessary for the hopper, at a very low figure. These parts were shipped in a bundle and sold by the dozen to the chain lumber dealers at a price lower than the farmers could purchase the lumber and manufacture the parts themselves. In this way thousands of properly designed hoppers were made available and the service of information was connected with the service of supplies.

In Missouri a series of six circular letters dealing with the "grow healthy chicks" project was assembled. These letters were sold to the county extension organizations, and in counties where no organization existed they were disposed of to private dealers who distributed them at their own expense.

Such methods when used in connection with farm meetings, demonstrations, publicity, and other means and agencies were found to be effective in reaching large numbers of people.

AGRICULTURAL ENGINEERING

The control of soil erosion continued to be the principal agricultural-engineering activity during 1929. Publicity campaigns proved effective in calling the attention of landowners to the serious losses resulting from soil erosion and in creating interest in the methods of control recommended by the extension specialists.

During the year terraces and soil-saving dams were constructed on 61,198 farms, where they served to prevent erosion on 1,819,282 acres at an average cost of \$5 to \$10 per acre. The amount of work accomplished was limited by the fact that comparatively few farmers were properly trained to locate and construct terrace systems. In several of the States the extension specialists attempted to overcome this difficulty by holding 2-day terracing schools during which farmers were given detailed instructions relative to the laying out and construction of terraces. These schools were well attended and materially increased the number of men trained to do terracing work in the States in which the schools were held.

On 18,116 farms more than 131,000 acres of cultivated land was cleared of stumps and stones. No attempt was made to increase the area cultivated by clearing new land, but attention was devoted rather to clearing up existing fields so that modern farm machinery might be used to advantage.

Drainage improvements were made by 13,803 farmers, more than 346,000 acres being drained by open ditches and 65,000 acres by tile. Irrigation systems were installed on 1,805 farms, to improve more than 72,000 acres.

In an effort to lower the cost of production many farmers began to use modern farm machinery and equipment, especially in the South in localities where 1-mule farming had been the prevailing practice. Numerous meetings were held by extension agents to demonstrate the proper use of the latest types of plows, planters, cultivators, harvesters, tractors, silage cutters, and seed cleaners. As a result, 24,167 farmers purchased machinery of a better type, and 11,640 additional farmers followed suggestions as to the maintenance and repair of machinery.

The construction of new farm houses, the remodeling of old dwellings, and the installation of modern heating, lighting, water, and sewage systems contributed greatly to the saving of the time and energy of the farm woman and to the comfort of the farm home. Extension agents reported that 3,055 new dwellings were constructed and 3,827 old dwellings were remodeled according to plans furnished by extension engineering specialists, and that 4,534 sewage systems, 3,927 water systems, 747 heating systems, and 3,451 lighting systems were installed according to recommendations.

The improvement of housing conditions for animals and equipment, and of accommodations for the storage of farm crops, received considerable attention from the extension specialists. They reported that 32,357 buildings other than dwellings were constructed or remodeled in accordance with plans furnished by them. Altogether, 172,170 farmers reported the adoption of improved agricultural-engineering practices during the year 1929, and of this number 11,376 farmers adopted such practices for the first time.

FARM MANAGEMENT

During 1929 there was an increased demand from farmers for economic facts that would assist them in planning their farm business. The economic and farm-management specialists of the cooperative extension service responded to this demand in the different States by furnishing programs designed to assist farmers in their economic problems. These programs approached the problems in two ways: (1) Through the dissemination of present available facts bearing upon the future economic conditions of the important farm products and (2) by assisting individual farmers and groups of farmers to adjust their farming operations to the conditions that are likely to confront them.

Much help was given in the assembling and preparation of economic subject matter for extension uses. Stress was placed on the preparation of outlook and related facts in strictly popular form for general distribution to farmers. This procedure was found to be one of the first requirements in presenting an analysis of the situation upon which farmers could safely act, since the demand for economic information was for facts as well as conclusions drawn from them.

To meet the needs of farmers as adequately as possible, effort was directed toward five main activities:

The first of these dealt with the application of good farm-management principles and the economic background of the factors influencing commodity price changes.

The second was the dissemination of timely information in the *Agricultural Situation* and *The Agricultural Outlook*. Included were the facts regarding crop acreages, conditions, and probable production; economic changes in the livestock industry; interpretations of trends in production and consumption; and prospects for the future.

The third activity concerned facts that assist the farmer to understand the types of farming areas and what constitutes good farm organization and enterprise management within these areas.

The fourth phase had to do with the development of a farm-accounting service that would enable the farmer to set down the essential facts that are necessary for him to have available in thinking his

problems through clearly and accurately as a basis of improvement. A system of accounting sufficiently simple to require a minimum of the farmer's time and yet sufficiently complete in facts to enable him to make an accurate and thorough analysis of his individual business, has been developed in more than 30 States.

The fifth phase of the work dealt with assistance in building extension programs. The program-building work opened the way to clearer cooperation between different extension specialists, leading farmers, and others in coordinating economic and production facts in all extension work.

In 1929, county agents in 1,201 counties reported assisting over 25,000 farmers in keeping farm accounts, and in 902 counties, agents assisted 20,206 farmers in keeping cost-of-production records. The assistance given by county agents to farmers in adjusting their operations was not, of course, limited to those who cooperated with them in keeping accounts. Although no report is available of the total contacts made in connection with the giving of economic information, the county agents in California, in 1929, kept a record of their economic extension work and reported holding 1,187 meetings attended by over 60,000 farm people. The agents spent 100 days per county in economic extension work.

MARKETING

Extension workers aided in the organization of 1,089 new farmers' cooperative-marketing associations during 1929 and assisted 2,809 cooperative associations that had been previously organized in the solution of their marketing problems. Approximately 583,000 farmers adopted improved marketing practices as a result of extension activities during the year. Increased effort was expended in many States in 1929 in an attempt to increase the membership of existing organizations, thereby increasing their volume of business and creating more economical units for operating purposes. With this end in view, the creameries and milk-receiving stations which had been operating on too small a volume to be profitable, combined to form larger and more profitable operating units. At least five States surveyed the livestock-shipping association territory in the hope of being able to combine several local associations into one large, efficient organization. This trend toward the merging of small operating units into larger units with more volume and consequently more bargaining power was rather general throughout all commodity groups. The passage of the agricultural marketing act, establishing the Federal Farm Board, undoubtedly had an important influence on local movements, most of which had as their definite goal affiliations with the national commodity organizations.

Cooperative-marketing schools were conducted in several States during the year, in cooperation with the United States Department of Agriculture, agricultural colleges, and marketing and other farm organizations. These schools lasted from one to three days. The average attendance was well over 200 and consisted largely of officers and directors of cooperative-marketing associations and other leaders of the cooperative-marketing movement.

Extension workers during the year disseminated market information to an increased number of farm families through the radio market-news service, by means of which market commodity reports were

received and distributed from leased-wire stations, carrying the market deliveries, market movements, market stocks on hand, price trends, and prices paid on the day's market. Such information tended to make it possible for the farmer to obtain the highest possible net returns for his products.

FOODS AND NUTRITION

Two hundred and forty-three home demonstration agents were added to extension rolls in 1929. This increase made possible better organization and supervision in the foods project in a number of counties, a situation which was reflected in greater enthusiasm on the part of the women, a larger percentage of completions, and more exact records of results than were possible in counties that did not have home demonstration agents. Nutrition specialists gave considerable time in 1929 to training new home demonstration agents to present or supervise the foods and nutrition project.

The problems encountered in this project have been enumerated repeatedly in previous reports, for they are of deep-seated origin and will exist for years to come. Although they differ in number and intensity in different localities, these problems are fairly characteristic of rural homes the country over. Many of them are equally characteristic of urban homes. They may be roughly analyzed as follows.

(1) Although much improvement was noted in 1929, food habits in many homes still brought about a diet low in mineral salts and vitamins, and sometimes in bulk or roughage. Such a diet tended to result in poor growth and defective teeth, and in constipation, colds, headaches, minor digestive upsets, discomfort, and loss of efficiency; to impair the body's resistance to such diseases as pneumonia and tuberculosis; and frequently to pave the way for really serious difficulties of the digestive tract, the liver, kidneys, pancreas, and blood vessels. Food-consumption studies confirmed the evidence collected from hundreds of home makers by means of the food-selection score card, to the effect that the foods most frequently neglected were milk, whole-grain products, and raw and cooked fruits and vegetables, and that the farm diet was likely to be especially restricted during the late winter and early spring. In some parts of the country, lack of animal protein constituted a serious deficiency.

(2) In many homes bad cooking methods exaggerated the situation resulting from poor food selection, by reducing or impairing the mineral and vitamin content of the foods prepared for the table or making them unpalatable. The untrained cook frequently rendered good foods unwholesome as well as flavorless.

(3) On some farms the food supply did not provide enough of the essential foods to meet the family's nutritional needs throughout the year. Farm people readily admitted that shortage of vegetables was too often not made up by cash purchases. Long-distance shopping was inconvenient, and the cash income for the average farm was low, ranging from \$500 to \$1,000. Since the minimum cost of the staple dry groceries needed for a family of two adults and three children has been estimated at not less than \$250 a year, it was plain that after the other necessities of the budget were provided for, there would be little ready money to spend for fresh vegetables and fruits.

(4) Lack of acquaintance with grades and standards often resulted in uneconomical expenditure of the money available for food.

(5) Faulty food habits and inadequate food supply may, however, have arisen from causes quite apart from ignorance of nutritional needs and difficult growing conditions. The home maker may have found her efforts to provide a better-balanced diet checkmated by long-standing food likes and dislikes of members of the household, who may even have taken a perverse satisfaction in resisting changes. Some women seemed to lack the wisdom, tact, and perseverance to cope with a family situation of this type, for which they themselves may unwittingly have laid the foundation.

A clearer realization of these problems led to the formulation of methods of work similar to the following in a majority of States: A sort of introductory or foundation series of from four to eight meetings was held with home demonstration clubs or special project groups in which the internal and external signs of good health, the food needs of the body, and the outstanding values of common foods were presented. The food-selection score card was used to check present food habits and to measure improvements made. Food preparation usually was an important part of this project, because it dramatized the work, set standards for the finished product, interested the women, and helped them to get their families out of food-habit ruts.

Another series would be devoted to the general problems of meal planning and serving, sometimes including work on food buying. The feeding of expectant mothers, infants, and children of preschool and school age was often organized in a separate series of meetings, especially where groups consisting largely of mothers could be brought together.

The home maker must not only consider the food needs of the normal members of the family but, in cooperation with her doctor, she must plan and prepare the diet for the ailing. Small wonder that there was a call from many groups for information on how the body digests and assimilates its food in normal health and in such conditions as constipation, diabetes, kidney trouble, indigestion, and cases of decided over or under weight. Although extension workers did not usurp the province of the doctor in diagnosing individual cases and prescribing individual diets, they helped many a perplexed home maker to carry out directions intelligently, and thus to relieve or cure serious conditions arising mainly from lack of proper feeding. This type of work usually was reserved for a second or third series of meetings, after the women had mastered the general foundations of food selection for normal adults and children. (Fig. 25.)

4-H CLUB WORK IN NUTRITION

Work with 4-H club members constituted an increasingly important part of the extension program in foods and nutrition. In 1929 there was a marked increase in the number of clubs organized for some phase of the project, in total enrollment, and in interest. Four-H clubs for girls were carried on in canning and food preservation, bread making, baking (other than bread making), food preparation, meal planning and preparation, food for health, hot school lunch, and mothers' vacation clubs. Throughout almost every outline for foods club work for girls ran the fundamental aim of improving

health through attention to good food habits and the skillful preparation of essential foods. Several States made the improvement of health through good food selection the main objective of certain clubs. Working toward the health contest as a climax, and assisted by physical examinations in the local clubs, 4-H girls developed great interest in checking and improving their own food and health habits and bringing themselves nearer to the standard of good health and nutrition. The more advanced groups often selected younger members of the family or a younger class in school, with which to conduct feeding and health demonstrations. Practically all of the advanced canning clubs required their members to make a food-preservation budget to meet the needs of the family. This requirement doubtless was stimulated by competitive exhibits featuring the canning budget at the National Club Congress and at State and county fairs.



FIGURE 25.—Local leader and group of women planning meals

HOME DEMONSTRATION MARKETS

With the increase of home demonstration markets in the Southern States and their gradual spread in the North and West, increased demand was made upon agents and specialists for their help in the standardization of special breads, cakes, salads, preserves, and jellies, as well as canned goods. Michigan, Illinois, New York, and West Virginia among others reported progress in this direction in 1929.

ECONOMIC CONFERENCES

The question of the farm income, of adequate standards of living for the farm home, and of the buying power of the farmer's dollar engaged the attention of groups of local men and women under the

leadership of county, State, and national extension workers in numerous counties during 1929. These economic conferences, based on data collected by extension workers from statistical sources and on surveys taken by men and women leaders of local conditions and of local habits and attitudes, revealed many problems in the line of foods and nutrition. In one type of conference, committees of local people estimated the expenditures for food, clothing, and household furnishing, which should be included each year in the farm family budget to provide for a reasonable standard of living, and then made these estimates the basis for determining the size and organization of the farm necessary to provide a sufficient income under local conditions.

Almost all of these conferences finally set up standards for a milk supply, a food garden, and a canning budget, and the number of poultry and meat animals to be raised and slaughtered for home consumption. What was more to the point, both men and women delegates undertook to forward a community program formulated by the conference. Economic conferences were held in 1929 in Arkansas, Colorado, Idaho, Illinois, Montana, Nevada, North Dakota, Oklahoma, Oregon, South Dakota, Tennessee, Utah, Vermont, Washington, West Virginia, and Wyoming. The economic approach not only reenforced the food-production program, but emphasized the necessity of intelligent buying for health and for economy.

LOCAL LEADERSHIP

Most States reported an increase in the number of local leaders over that in 1928. Iowa, for example, reported a total of 1,939 local leaders for the project, an increase of 500. Although the selection, training, and supervision of local leaders still remained a problem, many States reported the increasing willingness of leaders to continue to lead the nutrition project for several years and their growing efficiency and satisfaction with the work. Better supervision of the work of local leaders through visits by the agent or specialist to local groups was reported. Leaders were active in giving out information, and they improved in the taking of records and in the use of expedients to carry the project to members outside the regularly enrolled group.

INFORMATION

The year was marked by a determined effort to make contacts with a larger number of homes and to influence practices even of persons not connected with organized project groups. In addition to encouraging the efforts of enrolled group members to pass on information regularly to their neighbors, agents spent much time in organized information work. Compiling mailing lists of persons with special interests—for example, mothers of younger children; writing circular letters, many of them attractively illustrated; preparing general and feature articles for the county and State newspapers and for State extension publications—claimed the attention of specialists and home demonstration agents. Specialists reached large audiences through radio talks. More attention was given to general meetings in the county as an introduction to or a follow-up of the work of an organized project group. Lantern-slide series furnished by the Federal office or developed by the State, motion pictures, and other devices lent interest to these meetings.

Achievement days continued to furnish a climax for the work of the project and to serve as an opportunity for discussion, not only of accomplishments but of problems uncovered by a study of conditions, and of plans for meeting these problems by continued work. Observance of achievement days for the garden and nutrition project usually took the form of tours to visit especially fine gardens or well-stocked storage cellars. Window displays were more widely used than in previous years. For example, in connection with its child-feeding project, Kansas developed a standard plan for an exhibit of calcium-rich foods, showing the amount of each food required to furnish enough calcium to build a child's tooth. These exhibits were arranged so that they could be set up in different places over the county by local leaders and local grocerymen.

CONFERENCES OF NUTRITION SPECIALISTS

Nutrition specialists in 9 of the 11 Western States met at Las Cruces, N. Mex., in November to review the progress made on the Western States program since 1924 and to lay plans for future work. Nutrition specialists from Texas attended the conference as visitors. The specialists of the Northeastern States gave considerable time during 1929 to the preparation of economic data to be discussed at the conference of nutrition specialists in 1930.

HOME MANAGEMENT

"Sales resistance" was something about which our grandmothers did not have to worry. The farm home maker to-day finds this quality one of her most valued possessions. Reports of extension workers for 1929 indicated that the farm home maker is fortifying her "sales resistance" with a study of home equipment and furnishings that will enable her to make a wise choice. Specialists reported that the women have learned to think before they buy. Even merchants said that women were much more intelligent buyers than in the days before this subject was taken up in extension work.

The problems that were spoken of most in home-management reports dealt with economics of time and money: There was a scarcity of ready money; farm profits first went into farm equipment and more land; automobiles and use of gasoline ate up ready cash; farm families often lived in tenant homes or in poorly planned houses; electricity for power and light was lacking; distances from buying centers were too great; farm families were satisfied with things as they were—all these matters were taken into consideration in the development of home-management extension programs for 1929.

That there was a growing interest in this study of home-management by rural home makers was shown by the number of home-management specialists employed to develop this project. Thirty-four States employed such specialists. In other States the work was done by the State leader or assistant. Every State reported some work accomplished in home management. The year 1929 showed a trend away from the study of the kitchen and its equipment and toward the study of the home maker herself and the ways in which she might better fit herself to handle the problems that come up in her home which deal with the economic and social aspects of everyday living.

Progress was made in rural electrification. Rural women met in groups to discuss the factors to be considered in the purchase of electrical equipment, how to use electricity wisely, and the upkeep and repair of electrical equipment.

The work of the Federal Farm Board throughout the United States caused rural women as well as men to become more thoroughly interested in the economic aspects of the farm home. Rural women in a number of States set up recommendations on the minimum cash income for a farm family of five through economic conferences on the farm home.

As a result of this work rural women appreciated the fact that very often they did not know where the money came from or where it was going. After the economic farm-home conferences had been held, follow-up work was done on household account-keeping and "buy-manship."

During 1929, 10,591 women and 6,859 girls made budgets and kept accounts for the first time.

Extension agents, who, with the help of local home demonstration councils, tried to base home-management programs upon facts, found that very few facts were available. Surveys on the particular problems in which the farm women were interested brought out important facts which sometimes caused the extension program to be changed.

A survey of laundry conditions in 244 homes in Nebraska showed that 24 per cent of the women washed in the kitchen, 14 per cent used the basement or separate washhouse, and 47 per cent used porch or shed room. The laundry equipment on hand showed a range in price from \$12 to \$375. The cost of laundering at home varied from 10 to 40 cents per family washing. The average time used by women in washing was 36 minutes for preparation, 190 minutes for washing, 37.6 minutes for hanging and bringing in dry clothes, 138.1 minutes for sprinkling and ironing, and 21.9 minutes for cleaning up equipment, a total of 7 hours and 3.6 minutes to wash for a family of 4.7 people.

Though laundry work was not one of the important phases of home-management work conducted in the States in 1929, yet 14,899 women and 9,272 girls reported following improved laundry practices for the first time.

In 1929, more than ever before, home-management specialists used such means as surveys to obtain information upon which to base the home-management program, the training of local leaders to pass the information on to others, circular letters, newspapers, publicity, radio talks, demonstration homes, tours, exhibits, demonstration trucks, scoring, demonstration kits, slides, charts, and posters.

Plays, skits, and pageants all helped to carry across the message of home management. The titles of some of the playlets were "An Evening Well Spent," "Robbing Peter to Pay Paul," "Gulliver in the Land of Extravagance," "Easier Ways," and "Wheels v. Heels."

The demonstration kitchen continued to be reported as one of the best methods of obtaining results in home-management project work. Many demonstration kitchens were established during the year, and many tours were conducted to these demonstrations.

Many States reported on how to save time and steps in everyday housekeeping. One woman discovered that she could save 15 minutes a day in washing her separator if she moved her dish pan to a

more convenient position. Another who made a study of lamp cleaning saved 30 minutes daily by having members of the family bring down lamps in the morning and return them at night and by improving methods of cleaning. A dish drainer saved another woman 30 minutes daily, she reported.

The Washington State Extension Service reported:

Demonstrations, including cleaning of windows, hanging up the wash, ironing a man's shirt, baking a cake, or making an omelet, aimed at limiting as far as possible the time and motion used in each process. The demonstrators first attended a leader-training conference at which the entire process was developed with the specialist or home demonstration agent. The leaders then taught the operations to the community women. One woman reported that after she had rearranged her equipment she counted the steps and found she saved 22 steps each time she washed dishes.

Another home maker reported that her husband became so enthusiastic over the efficiency plan she was using in the home that he decided to try it on the farm. He first studied the cleaning of the milking machine so that he was now able to do it in three minutes. He next studied the cleaning of the barn and was able to cut down his labor costs.

This type of work resulted in 21,038 women following a systematized plan of housework and 28,733 planning or rearranging their kitchens for convenience during 1929.

The labor-saving equipment that was reported as having been installed most frequently in farm homes during the year was an electric or gasoline iron.

Extension agents and women told many human-interest stories of the equipment installed and the farm homes that were made efficient and attractive with little cost. A typical story was related by a farm woman in Kentucky.

We had been interested for quite a while in putting water into the house, but the kind of system we were thinking of cost several hundred dollars, including the digging of a deep well (we only had a cistern), so we never got around to it. But after seeing the illustrations of these simple systems, we had a pitcher pump, sink, and drain in less than a week, and my husband did all the work. After knowing the convenience of this easily installed and cheap (cost less than \$10) way of having water in the kitchen, I feel like preaching to the farm women the "gospel of the kitchen pump."

During 1929, 71,316 women and 16,193 girls studied the managerial phases of housekeeping; 24,854 method demonstrations were given by extension agents; and 126,369 different homes adopted improved practices in home management.

HOME FURNISHING

Until I began to take the home furnishing work, a lovely old chest of drawers occupied the darkest part of the attic; now it helps to furnish my guest room, along with several other old walnut pieces—heirlooms, which I had failed to cherish.

This statement was one of the many comments found in the annual reports of extension workers, showing the delight that farm women took in the home-furnishing project work in 1929.

To create more useful and beautiful home interiors; to teach good design and wise selection of home furnishings; to create better family relationships through artistic, comfortable surroundings; and to create a home that would teach boys and girls good standards of living were some of the aims of the extension workers. The reports showed that home improvement was not accomplished in a day or even in a year.

Most of the States had long-time programs of work which aimed at accomplishing as much as possible each year. (Fig. 26.)

A county in a southern State started a long-time home-improvement program which urged the adoption of four simple practices each year by the rural women within the county. The first year the mantelpiece, which had been used for a catch-all, especially for medicines and toilet articles, was to be cleared off, and a medicine cabinet was to be built to hold these articles. All the calendars which had accumulated during the past years were to be removed. A rug was to be made from left-over materials, and a reading center arranged with a comfortable chair, good light, and a place for books and magazines. The next year one good picture was to be hung in the living



FIGURE 26—An attractive corner in a farm home changed under the direction of home demonstration agent

room, the floor was to be refinished, a shelf made for books, and another rug added.

The subject-matter information given in the various States covered the following topics: Furniture arrangement; color and design; floor, wall, and woodwork finishes; home dyeing; homemade rugs; curtains and drapes; the selection of commercial floor coverings; slip covers; the selection of household linens; refinishing and renovation of furniture; the wise choice of china, glass, and pottery; pictures for the home; basketry; accessories; basket weaving; storage spaces in the living room and bedrooms; and lighting and lamps.

The farm family, once it became interested in beautifying the interior of the home, soon desired help in beautifying the exterior surroundings. Landscape and forestry specialists cooperated with home-furnishing and home-management specialists in developing this

phase of the work. The reports showed that 17,181 home grounds were beautified.

The demonstration home was considered one of the best means of carrying across the message of beautification of the interior and exterior of the home. Tours, achievement-day programs, where plays and skits on home-furnishing topics were given by the women, and exhibits, all gave publicity to the results achieved.

The spirit of home making was not omitted from the work given by extension agents. A Nebraska woman, as a culmination of her study of making the home beautiful, wrote her ideas of an ideal home:

I think the true spirit of a home is found where every member of the household has opportunity for a happy, normal growth. We have all visited in houses luxuriously furnished yet lacking an atmosphere of home, and all have been in the small, simply furnished house which radiated its home atmosphere of peace, comfort, and happiness. This contrast indicates that it is the spirit of the home which makes comfort and beauty and that physical conditions are of importance only as they tend to make the spirit more perfect.

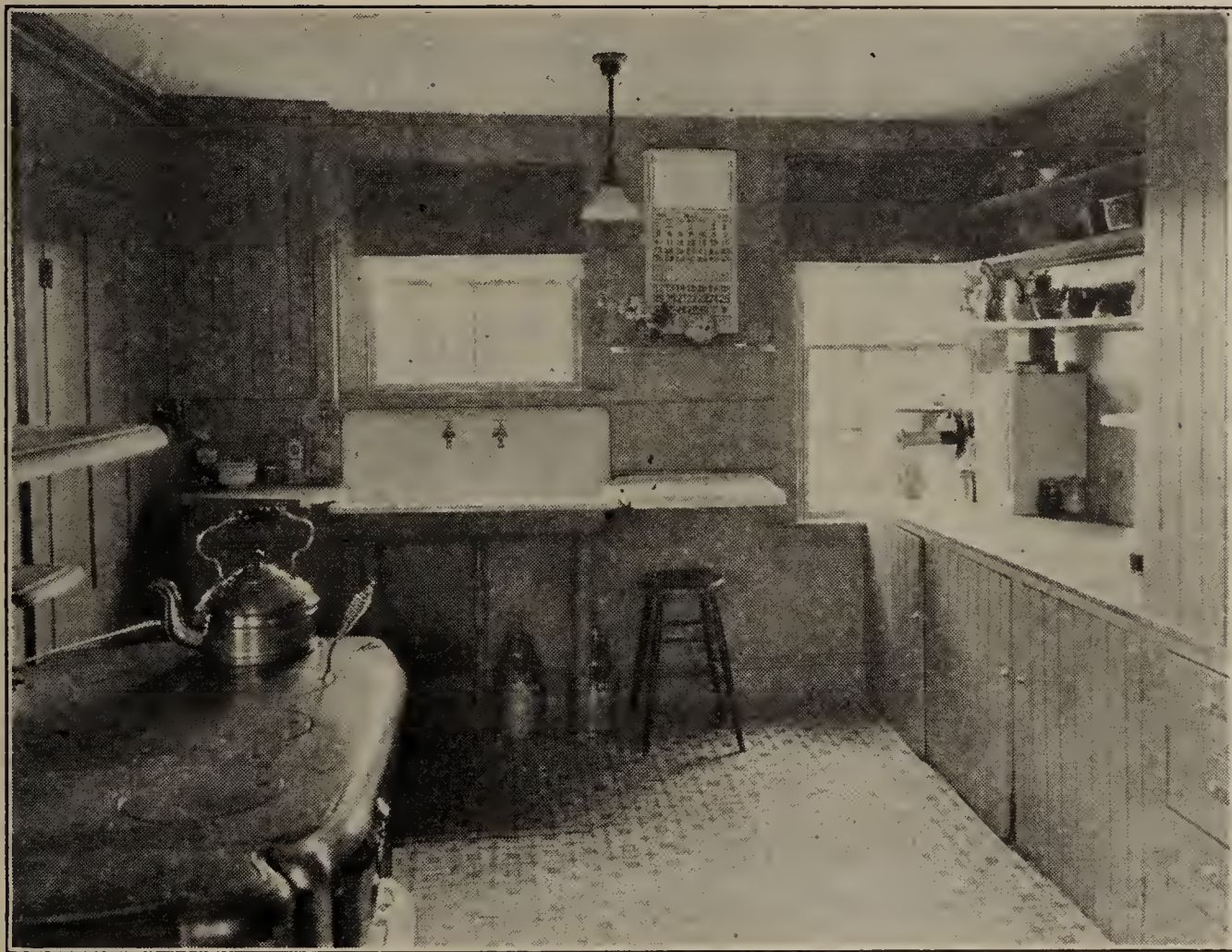


FIGURE 27.—A kitchen improved as a result of home demonstration teachings

Simplicity and careful arrangement of colors and furnishings in a home aid in its effect of beauty. Cleanliness and order are requisites to beauty in any form. Good pictures or paintings and literature play an important role in making the spirit of the home attractive. Much of the permanent beauty of the home depends upon the home maker. She must first formulate her ideal plan and then cheerfully and patiently work toward that goal.

In Carroll County, Md., intensive work on kitchen improvement was done during 1928. In 1929 the rural women continued their study of home improvement by focusing their attention upon the living room. (Fig. 27.)

Prior to the presentation of the home-furnishing program a survey was made to determine the needs of the average Carroll County living

room. Two hundred and fifty home makers filled out forms for a survey, which showed that the following conditions prevailed:

The home maker in the average Carroll County home had given less thought to the living room than to any other room in the house. Sixty-five per cent of the group did not use curtains in the living room; 75 per cent of the homes had two living rooms because they had been built in early days; many door and window openings made decorative schemes difficult; 40 per cent of the group reported having radios, but less than 75 per cent kept their radios in the living room.

A series of circular letters was sent to the women in the county. Bulletins were sent upon request, and a series of meetings covering the following subjects was held during the year: (1) Arrangement of furnishings, (2) color schemes for the home, (3) curtains and draperies (4) refinishing of the furniture, (5) accessories for the home, (6) achievement tours.

The girls' 4-H club work in room improvement continued to grow, 76,361 girls enrolled in room-improvement work, and 57,120 bedrooms were improved during 1929.

A story of how home-furnishing work through the extension service helped her to make her home beautiful was told by a Kentucky home maker.

When I walked into my husband's home as a bride my thoughts ran pell-mell over each other with delightful impressions of how I could make over the old furniture that I saw in every room.

An old-fashioned sofa over 100 years old had been set aside as unfit for further use. But to me there was a quaintness and beauty about it even in its old age. Immediately I saw visions of a "new life" for it with a little study in the local home maker's club on refinishing, including painting and upholstering. A couple of days' hard work resulted in my having quite the most attractive couch in the neighborhood. The details were: Straightening the springs, mending the padding, removing the old paint and sandpapering for smoothness, varnishing the wood parts, and lastly, upholstering in tapestry. An old desk and a floor lamp were also renovated.

Improved practices in selection and arrangement of furnishings were reported as having been adopted by 92,095 women; 56,345 women and 22,849 girls repaired and remodeled furnishings and thus put into practice the slogan, "Make the best use of materials on hand"; floors, walls, and woodwork were improved by 52,094 women and 20,991 girls.

Girls and women worked on 57,120 bedrooms, 34,279 living rooms, 20,207 dining rooms, and 27,119 other rooms.

STATISTICS

[Funds for extension work are appropriated for fiscal years ending June 30, whereas extension agents are required to prepare their reports for calendar years. For this reason the statements of funds expended are for the fiscal year ended June 30, 1929, and the statistics of results of work done are for the calendar year ended Nov. 30, 1929]

TABLE 14.—Results of cooperative extension work, 1929

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents ¹		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
County associations fostering extension work	1,965	2,390	891	1,292	92	105	2,948	3,787
Membership in these associations	1,810	517,199	864	185,255	88	14,210	2,762	716,664
Communities in counties	2,436	49,607	1,276	38,665	176	8,552	3,888	96,824
Communities with extension program	2,268	34,199	1,255	25,537	164	5,296	3,687	65,032
Voluntary local leaders:								
Adult	2,224	134,675	1,127	65,928	27	1,279	3,378	201,882
Junior	2,083	39,733	1,047	22,791	195	9,112	3,325	71,636
Adult clubs	1,516	21,819	1,234	22,759	21	206	2,771	44,784
Membership in adult clubs	1,212	490,405	1,246	409,619	21	5,100	2,479	914,124
Junior clubs	2,108	25,555	1,158	17,017	198	9,608	3,464	52,180
Enrollment—								
Boys	2,171	237,274	243	11,137	200	55,098	2,614	303,509
Girls	1,589	127,437	1,161	260,868	203	64,282	2,953	452,587
Completions—								
Boys	2,083	155,671	213	6,402	198	39,837	2,494	201,910
Girls	1,503	92,166	1,106	162,868	202	50,543	2,811	305,577
Number of junior judging teams trained	1,395	5,177	480	3,576	156	1,342	2,031	10,095
Number of junior demonstration teams trained	1,260	10,391	745	9,337	146	2,081	2,151	21,809
Farm visits made	2,495	1,546,677	201	19,148	172	67,329	2,868	1,633,151
Different farms visited	2,490	793,688	201	10,994	172	35,595	2,863	840,277
Home visits made	943	106,049	1,287	358,710	126	24,535	2,356	489,294
Different homes visited	940	74,796	1,284	212,412	126	14,606	2,350	301,814
Office calls	2,479	3,403,028	1,285	540,422	178	48,275	3,942	3,991,725
Telephone calls	2,359	2,123,316	1,244	520,834	179	66,573	3,782	2,710,723
Percentage of time in field		67		66		68		66
Percentage of time in office		33		34		32		34
Number of news articles prepared for press	2,440	303,613	1,254	105,501	175	14,486	3,869	423,600
Individual letters written	2,486	3,337,389	1,294	1,192,170	185	183,381	3,965	4,712,940

¹ Includes club work in counties without extension agents, reported by State club leaders.

TABLE 14.—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
Number of bulletins distributed.....	2, 397	4, 253, 574	1, 247	1, 842, 773	164	249, 141	3, 808	6, 345, 488
Junior leader-training meetings held.....	1, 360	8, 032	639	3, 392	152	1, 469	2, 151	12, 893
Attendance.....	1, 341	77, 941	622	40, 183	151	14, 457	2, 114	132, 581
Adult leader-training meetings held.....	1, 311	15, 815	790	12, 835	21	61	2, 122	28, 711
Attendance.....	1, 302	149, 342	787	120, 895	21	1, 341	2, 110	271, 578
Method and results demonstrations:								
Meetings held.....	2, 313	201, 249	1, 218	262, 065	172	23, 084	3, 703	486, 398
Attendance.....	2, 309	3, 811, 146	1, 209	3, 972, 297	171	350, 750	3, 689	8, 134, 193
Number of junior club encampments held.....	1, 278	1, 326	614	714	129	205	2, 021	2, 245
Total attendance.....	1, 278	101, 458	614	57, 994	129	14, 193	2, 021	173, 645
Number of women's club encampments held.....	156	157	470	497	8	22	634	676
Total attendance.....	155	14, 748	470	54, 762	8	928	633	70, 438
Total number of all meetings.....	2, 313	384, 598	1, 218	340, 874	172	45, 849	3, 703	771, 321
Total attendance.....	2, 309	15, 414, 833	1, 209	8, 244, 810	171	1, 218, 593	3, 689	24, 878, 236
Meetings at which lantern slides were shown.....	738	5, 770	247	1, 291	73	686	1, 058	7, 747
Meetings at which motion pictures were shown.....	1, 260	16, 196	374	2, 080	97	841	1, 731	19, 117
Soils:								
Adult result demonstrations.....	1, 822	81, 041	---	---	9	583	1, 831	81, 624
Farms on which advice was followed in the use of commercial fertilizer.....	1, 860	190, 079	---	---	12	810	1, 872	190, 889
Farms on which lime or limestone was used as advised.....	1, 417	46, 348	---	---	12	705	1, 429	47, 053
Farms on which better care of farm manure was taken.....	1, 243	55, 910	---	---	4	358	1, 247	56, 268
Farms on which green-manure crops were plowed under.....	1, 446	51, 190	---	---	4	117	1, 450	51, 307
Farms on which other improved soils practices were adopted.....	859	49, 365	---	---	4	89	863	49, 454
Different farms on which better practices were adopted.....	2, 227	350, 479	---	---	15	1, 415	2, 242	351, 894
Corn:								
Adult result demonstrations.....	1, 528	24, 213	---	---	6	17	1, 534	24, 230
Junior projects completed.....	1, 215	24, 798	---	---	87	1, 422	1, 302	26, 220
Farms on which improved seed was planted.....	1, 517	43, 837	---	---	24	201	1, 541	44, 038
Farms on which seed selection was practiced.....	1, 297	25, 300	---	---	18	223	1, 315	25, 523
Farms on which other improved practices were adopted.....	664	29, 720	---	---	10	176	674	29, 896
Different farms on which better practices were adopted.....	1, 945	121, 148	---	---	69	1, 129	2, 014	122, 277
Wheat:								
Adult result demonstrations.....	725	5, 752	---	---	4	18	729	5, 770
Junior projects completed.....	70	436	---	---	3	11	73	447
Farms on which improved seed was planted.....	801	14, 140	---	---	3	24	804	14, 164
Farms on which seed selection was practiced.....	274	2, 693	---	---	1	17	275	2, 710
Farms on which seed was treated for smut.....	688	20, 049	---	---	2	10	690	20, 059
Farms on which other improved practices were adopted.....	298	7, 875	---	---	1	12	299	7, 887
Different farms on which better practices were adopted.....	1, 177	39, 411	---	---	8	55	1, 185	39, 466

Oats:							
Adult result demonstrations	833	5,687		1	13	834	5,700
Junior projects completed ²	65	408				65	408
Farms on which improved seed was planted	860	13,483		1	7	861	13,490
Farms on which seed selection was practiced	246	2,361		1	5	247	2,366
Farms on which seed was treated for smut	774	25,976		1	20	775	25,996
Farms on which other improved practices were adopted	284	7,877				284	7,877
Different farms on which better practices were adopted	1,363	47,171		2	27	1,365	47,198
Rye:							
Adult result demonstrations	246	1,927				246	1,927
Junior projects completed ²	12	77				12	77
Farms on which improved seed was planted	271	5,656		1	6	272	5,662
Farms on which seed selection was practiced	63	263		1	6	64	269
Farms on which other improved practices were adopted	98	850				98	850
Different farms on which better practices were adopted	405	8,367		1	6	406	8,373
Barley:							
Adult result demonstrations	455	2,737		1	10	456	2,747
Junior projects completed ²	23	276				23	276
Farms on which improved seed was planted	580	10,362		1	5	581	10,367
Farms on which seed selection was practiced	164	1,366				164	1,366
Farms on which other improved practices were adopted	136	1,853				136	1,853
Different farms on which better practices were adopted	789	19,305		2	20	791	19,325
Other cereals:							
Adult result demonstrations	278	2,474				278	2,474
Junior projects completed ²	128	1,733		5	36	133	1,769
Farms on which improved seed was planted	251	9,281				251	9,281
Farms on which seed selection was practiced	140	1,701				140	1,701
Farms on which other improved practices were adopted	105	2,616				105	2,616
Different farms on which better practices were adopted	403	16,436		4	35	407	16,471
Alfalfa:							
Adult result demonstrations	1,067	12,705		2	8	1,069	12,713
Junior projects completed ²	47	314		9	149	56	463
Farms on which improved seed was planted	1,003	20,219		5	56	1,008	20,275
Farms on which seed selection was practiced	133	2,009		2	37	135	2,046
Farms on which inoculation for this crop was practiced	964	18,958		8	98	972	19,056
Farms on which other improved practices were adopted	509	10,511				509	10,511
Different farms on which better practices were adopted	1,548	49,284		13	207	1,561	49,491
Soybeans:							
Adult result demonstrations	908	12,041				908	12,041
Junior projects completed ²	129	1,387		4	23	133	1,410
Farms on which improved seed was planted	810	21,539		1	18	811	21,557
Farms on which seed selection was practiced	284	3,207				284	3,207
Farms on which inoculation for this crop was practiced	740	16,101		2	29	742	16,130
Farms on which other improved practices were adopted	353	9,602				353	9,602
Different farms on which better practices were adopted	1,245	47,970		6	40	1,251	48,010
Sweetclover:							
Adult result demonstrations	807	7,333		3	7	810	7,340
Junior projects completed ²	9	26		1	10	10	36
Farms on which improved seed was planted	598	10,369		2	25	600	10,394
Farms on which seed selection was practiced	114	966				114	966

² Boys' and girls' club members.

TABLE 14.—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
Sweetclover—Continued.								
Farms on which inoculation for this crop was practiced	733	12, 123			4	37	737	12, 160
Farms on which other improved practices were adopted	300	6, 465			1	1	301	6, 466
Different farms adopting better practices	1, 204	28, 284			5	55	1, 209	28, 339
Crimson clover:								
Adult result demonstrations	159	962					159	962
Junior projects completed ²	3	32					3	32
Farms on which improved seed was planted	104	1, 021			1	1	105	1, 022
Farms on which seed selection was practiced	21	100					21	100
Farms on which inoculation for this crop was practiced	95	628					95	628
Farms on which other improved practices were adopted	48	784					48	784
Different farms on which better practices were adopted	224	2, 512			1	1	225	2, 513
Clover (red, alsike, white):								
Adult result demonstrations	359	3, 251			3	6	362	3, 257
Junior projects completed ²	8	51			2	5	10	56
Farms on which improved seed was planted	292	5, 809			4	20	296	5, 829
Farms on which seed selection was practiced	77	1, 033					77	1, 033
Farms on which inoculation for this crop was practiced	234	2, 889			1	4	235	2, 893
Farms on which other improved practices were adopted	148	4, 144					148	4, 144
Different farms on which better practices were adopted	584	14, 569			5	35	589	14, 604
Cowpeas:								
Adult result demonstrations	419	6, 772					419	6, 772
Junior projects completed ²	83	879					83	879
Farms on which improved seed was planted	216	2, 775					216	2, 775
Farms on which seed selection was practiced	112	1, 382					112	1, 382
Farms on which inoculation for this crop was practiced	129	950					129	950
Farms on which other improved practices were adopted	127	2, 431					127	2, 431
Different farms on which better practices were adopted	493	12, 257					493	12, 257
Velvetbeans:								
Adult result demonstrations	205	2, 672					205	2, 672
Junior projects completed ²	13	168					13	168
Farms on which improved seed was planted	129	1, 924					129	1, 924
Farms on which seed selection was practiced	59	384					59	384
Farms on which inoculation for this crop was practiced	26	174					26	174
Farms on which other improved practices were adopted	60	997					60	997
Different farms on which better practices were adopted	238	6, 132					238	6, 132

Field beans:									
Adult result demonstrations.....									
Junior projects completed ²	140	1, 194	---	---	---	17	---	208	140
Farms on which improved seed was planted.....	31	275	---	---	---	3	---	10	48
Farms on which seed selection was practiced.....	104	2, 496	---	---	---	---	---	---	107
Farms on which inoculation for this crop was practiced.....	54	544	---	---	---	1	---	2	54
Farms on which other improved practices were adopted.....	33	323	---	---	---	---	---	---	34
Farms on which other improved practices were adopted.....	61	789	---	---	---	6	---	35	61
Different farms on which better practices were adopted.....	196	4, 337	---	---	---	---	---	---	202
Peanuts:									
Adult result demonstrations.....									
Junior projects completed ²	277	2, 567	---	---	---	---	---	---	277
Farms on which improved seed was planted.....	301	3, 050	---	---	---	6	---	94	307
Farms on which seed selection was practiced.....	197	2, 347	---	---	---	2	---	29	199
Farms on which inoculation for this crop was practiced.....	122	1, 161	---	---	---	---	---	---	122
Farms on which other improved practices were adopted.....	40	355	---	---	---	---	---	---	40
Farms on which other improved practices were adopted.....	105	1, 769	---	---	---	1	---	15	106
Different farms on which better practices were adopted.....	380	8, 322	---	---	---	2	---	34	382
Lespedeza:									
Adult result demonstrations.....									
Junior projects completed ²	443	5, 549	---	---	---	4	---	11	447
Farms on which improved seed was planted.....	9	32	---	---	---	---	---	---	9
Farms on which seed selection was practiced.....	319	5, 307	---	---	---	4	---	93	323
Farms on which inoculation for this crop was practiced.....	100	805	---	---	---	2	---	19	102
Farms on which other improved practices were adopted.....	69	531	---	---	---	---	---	---	69
Farms on which other improved practices were adopted.....	124	1, 902	---	---	---	1	---	10	125
Different farms on which better practices were adopted.....	528	10, 695	---	---	---	4	---	117	532
Pastures:									
Adult result demonstrations.....									
Junior projects completed ²	931	10, 963	---	---	---	3	---	20	934
Farms on which improved seed was planted.....	18	97	---	---	---	2	---	6	20
Farms on which seed selection was practiced.....	445	6, 204	---	---	---	2	---	25	447
Farms on which inoculation for this crop was practiced.....	36	456	---	---	---	---	---	---	36
Farms on which other improved practices were adopted.....	108	1, 249	---	---	---	1	---	9	109
Farms on which other improved practices were adopted.....	351	6, 413	---	---	---	2	---	15	353
Different farms on which better practices were adopted.....	1, 107	23, 662	---	---	---	6	---	82	1, 113
Other legumes and forage crops:									
Adult result demonstrations.....									
Junior projects completed ²	349	9, 962	---	---	---	---	---	---	349
Farms on which improved seed was planted.....	40	750	---	---	---	1	---	3	41
Farms on which seed selection was practiced.....	192	5, 296	---	---	---	---	---	---	192
Farms on which inoculation for this crop was practiced.....	54	771	---	---	---	1	---	1	55
Farms on which other improved practices were adopted.....	151	5, 300	---	---	---	---	---	---	151
Farms on which other improved practices were adopted.....	139	4, 258	---	---	---	---	---	---	139
Different farms on which better practices were adopted.....	425	19, 716	---	---	---	1	---	4	426
Potatoes:									
Adult result demonstrations.....									
Junior projects completed ²	872	8, 291	---	---	---	2	---	5	874
Farms on which improved seed was planted.....	577	7, 365	---	---	---	121	---	3, 208	698
Farms on which seed selection was practiced.....	969	29, 365	---	---	---	53	---	668	1, 022
Farms on which seed was treated for disease.....	518	10, 428	---	---	---	31	---	325	549
Farms on which spraying or dusting for disease and insects was practiced.....	915	16, 736	---	---	---	40	---	435	955
Farms on which other improved practices were adopted.....	755	24, 121	---	---	---	36	---	360	791
Different farms on which better practices were adopted.....	352	8, 773	---	---	---	16	---	117	368
	1, 363	71, 041	---	---	---	96	---	2, 142	1, 459

¹ Boys' and girls' club members.

TABLE 14—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents ¹		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
Sweetpotatoes:								
Adult result demonstrations.....	455	4,136	---	---	1	7	456	4,143
Junior projects completed ²	309	2,522	---	---	14	270	323	2,792
Farms on which improved seed was planted.....	310	5,611	---	---	3	20	313	5,631
Farms on which seed selection was practiced.....	258	3,747	---	---	2	5	260	3,752
Farms on which seed was treated for disease.....	328	5,637	---	---	3	14	331	5,651
Farms on which spraying or dusting for disease and insects was practiced.....	78	789	---	---	1	2	79	791
Farms on which other improved practices were adopted.....	165	2,930	---	---	2	8	167	2,938
Different farms on which better practices were adopted.....	604	18,824	---	---	6	124	610	18,948
Cotton:								
Adult result demonstrations.....	742	26,174	---	---	2	4	744	26,178
Junior projects completed.....	658	22,683	---	---	8	848	666	23,531
Farms on which improved seed was planted.....	606	35,611	---	---	4	93	610	35,704
Farms on which seed selection was practiced.....	346	10,010	---	---	2	28	348	10,038
Farms on which seed was treated for disease.....	51	1,061	---	---	1	5	52	1,066
Farms on which spraying or dusting for disease and insects was practiced.....	473	24,361	---	---	3	183	476	24,544
Farms on which other improved practices were adopted.....	297	18,798	---	---	2	14	299	18,812
Different farms on which better practices were adopted.....	837	91,856	---	---	4	242	841	92,098
Tobacco:								
Adult result demonstrations.....	260	3,242	---	---	3	27	263	3,269
Junior projects completed ²	149	2,533	---	---	4	376	153	2,909
Farms on which improved seed was planted.....	130	5,552	---	---	---	---	130	5,552
Farms on which seed selection was practiced.....	75	1,755	---	---	1	3	76	1,758
Farms on which seed was treated for disease.....	110	6,796	---	---	1	5	111	6,801
Farms on which spraying or dusting for disease and insects was practiced.....	111	3,330	---	---	2	7	113	3,337
Farms on which other improved practices were adopted.....	117	5,077	---	---	2	12	119	5,089
Different farms on which better practices were adopted.....	303	19,821	---	---	4	343	307	20,164
Other miscellaneous crops:								
Adult result demonstrations.....	139	1,887	---	---	---	---	139	1,887
Junior projects completed ²	53	501	---	---	3	74	56	575
Farms on which improved seed was planted.....	93	2,995	---	---	---	---	93	2,995
Farms on which seed selection was practiced.....	47	731	---	---	---	---	47	731
Farms on which seed was treated for disease.....	43	684	---	---	---	---	43	684
Farms on which spraying or dusting for disease and insects was practiced.....	58	1,049	---	---	---	---	58	1,049
Farms on which other improved practices were adopted.....	64	2,048	---	---	---	---	64	2,048
Different farms on which better practices were adopted.....	208	9,405	---	---	3	74	211	9,479

Tree fruits:									
Adult result demonstrations									
Junior projects completed ²	1, 105	12, 072	-----	-----	5	20	1, 110	12, 092	
Farms on which improved stock or seed was planted	104	674	-----	-----	11	54	115	728	
Farms on which better pruning methods were adopted	691	10, 705	-----	-----	3	15	694	10, 720	
Farms on which spraying or other treatment for disease or insect pests was practiced	1, 195	18, 045	-----	-----	10	40	1, 205	18, 085	
Farms on which other improved practices were adopted	1, 267	31, 495	-----	-----	7	50	1, 274	31, 545	
Different farms on which better practices were adopted	603	15, 677	-----	-----	5	28	608	15, 705	
Bush and small fruits:	1, 697	67, 253	-----	-----	14	276	1, 711	67, 529	
Adult result demonstrations									
Junior projects completed ²	315	1, 773	-----	-----	2	6	317	1, 779	
Farms on which improved stock or seed was planted	48	517	-----	-----	26	265	74	782	
Farms on which better pruning methods were adopted	273	2, 495	-----	-----	6	41	279	2, 536	
Farms on which spraying or other treatment for disease or insect pests was practiced	271	1, 929	-----	-----	-----	-----	271	1, 929	
Farms on which other improved practices were adopted	306	3, 402	-----	-----	2	5	308	3, 407	
Different farms on which better practices were adopted	150	3, 415	-----	-----	4	26	154	3, 441	
Grapes:	617	10, 551	-----	-----	14	169	631	10, 720	
Adult result demonstrations									
Junior projects completed ²	370	1, 501	-----	-----	3	10	373	1, 511	
Farms on which improved stock or seed was planted	17	149	-----	-----	2	20	19	169	
Farms on which better pruning methods were adopted	228	1, 487	-----	-----	-----	-----	228	1, 487	
Farms on which spraying or other treatment for disease or insect pests was practiced	461	3, 978	-----	-----	1	6	462	3, 984	
Farms on which other improved practices were adopted	399	3, 483	-----	-----	-----	-----	399	3, 483	
Different farms adopting better practices	151	2, 782	-----	-----	1	3	152	2, 785	
Market gardening:	746	10, 066	-----	-----	5	37	751	10, 103	
Adult result demonstrations									
Junior projects completed ²	454	5, 989	-----	-----	-----	-----	454	5, 989	
Farms on which improved stock or seed was planted	165	2, 077	-----	-----	18	358	183	2, 435	
Farms on which better pruning methods were adopted	318	8, 105	-----	-----	2	15	320	8, 120	
Farms on which spraying or other treatment for disease or insect pests was practiced	91	1, 696	-----	-----	-----	-----	91	1, 696	
Farms on which other improved practices were adopted	374	10, 722	-----	-----	-----	-----	374	10, 722	
Different farms on which better practices were adopted	228	8, 322	-----	-----	2	7	230	8, 329	
Home gardening:	668	25, 126	-----	-----	13	242	681	25, 368	
Adult result demonstrations									
Junior projects completed ²	364	8, 982	-----	585	3	45	952	65, 485	
Farms on which improved stock or seed was planted	391	9, 556	-----	585	133	9, 977	1, 109	73, 990	
Farms on which better pruning methods were adopted	246	8, 225	-----	-----	12	498	258	8, 723	
Farms on which spraying or other treatment for disease or insect pests was practiced	56	1, 040	-----	-----	-----	-----	56	1, 040	
Farms on which other improved practices were adopted	378	12, 046	-----	549	17	289	944	43, 127	
Different farms on which better practices were adopted	175	7, 014	-----	790	13	147	188	7, 161	
Beautifying home grounds:	790	35, 349	-----	-----	87	4, 224	1, 667	167, 142	
Adult result demonstrations									
Junior projects completed ²	503	6, 100	-----	562	6	116	1, 071	40, 898	
Farms on which improved stock or seed was planted	88	2, 819	-----	444	27	979	559	46, 355	
Farms on which better pruning methods were adopted	286	4, 720	-----	-----	7	157	293	4, 877	
Farms on which spraying or other treatment for disease or insect pests was practiced	149	1, 414	-----	-----	2	9	151	1, 423	
Farms on which other improved practices were adopted	190	2, 548	-----	-----	4	56	194	2, 604	
Different farms on which better practices were adopted	175	4, 044	-----	-----	3	107	178	4, 151	
'Boys' and girls' club members.	781	19, 941	-----	805	32	835	1, 618	112, 533	

TABLE 14.—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agent		Total of all lines of work	
	Agents report-ing	Number	Agents report-ing	Number	Agents report-ing	Number	Agents report-ing	Number
Forestry								
Adult result demonstrations	557	4,870					557	4,870
Junior projects completed ²	94	1,622			61	2,230	155	3,852
Forest or wood-lot plantings made	297	3,982			44	1,352	341	5,334
Farms on which windbreaks were planted	249	3,074			3	14	252	3,088
Farms on which attempts were made to control white-pine blister rust	28	907			3	42	41	949
Farms on which other improved practices were adopted	189	3,910			5	44	194	3,954
Different farms on which better practices were adopted	854	19,523			53	1,827	907	21,350
Rodents and other animal pests:								
Adult result demonstrations	415	9,451					415	9,451
Farms on which control measures were adopted	770	106,511					770	106,511
Grasshoppers and other insect pests:								
Adult result demonstrations	370	6,899					370	6,899
Farms on which control measures were adopted	546	70,650					546	70,650
Dairy cattle:								
Adult result demonstrations	1,194	19,190	257	12,694	6	142	1,457	32,026
Junior projects completed ²	1,359	26,275	199	4,123	180	6,820	1,738	37,218
Farms on which assistance was given in obtaining purebred sires	1,892	19,575			49	154	1,941	19,729
Farms on which assistance was given in obtaining high-grade or purebred females	1,649	22,426			76	682	1,725	23,108
Farms culling herds	1,056	15,393			9	27	1,065	15,420
Bull associations organized during the year	300	717			3	3	303	720
Members in bull associations	293	7,478			3	43	296	7,521
Breed associations organized during the year	205	291			3	5	208	296
Members in breed associations	212	7,310			3	81	215	7,391
Cow-testing associations organized or reorganized during the year	1,040	1,496			4	4	1,044	1,500
Members in cow-testing associations	1,072	54,967			6	121	1,078	35,088
Other farms on which cows were tested for production	921	24,113			16	170	937	24,283
Cows under test by such associations and on individual farms	1,244	595,874			14	2,887	1,258	598,761
Farms on which improved practices in the sanitary production and care of milk were adopted	1,405	61,277			11	213	1,753	78,552
Farms on which better-balanced rations were fed	1,817	67,328	337	17,062	28	447	2,130	76,640
Farms on which insect pests were controlled	503	8,821	285	8,865	3	24	506	8,845
Farmers directly influenced to test animals for tuberculosis	962	255,343			11	94	973	255,437
Farmers directly influenced to vaccinate animals for blackleg	531	12,993			2	18	533	13,011
Farms on which other improved practices were adopted	572	31,070			16	150	588	31,220
Different farms on which better practices were adopted	2,326	450,477	400	33,466	159	4,865	2,885	488,805

TABLE 14.—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
Poultry—Continued.								
Farms on which assistance was given in obtaining high-grade or purebred females	1,012	20,702	---	---	38	656	1,050	21,358
Farms on which flocks were culled	1,773	52,269	518	17,465	44	328	2,335	70,062
Breed associations organized during the year	104	232	---	---	1	1	105	233
Members in breed associations	108	4,940	---	---	1	12	109	4,952
Farms on which better-balanced rations were fed	1,436	69,458	495	20,927	20	298	1,951	90,683
Farms on which insect pests were controlled	1,391	54,763	458	17,749	17	181	1,866	72,693
Farmers directly influenced to test birds for tuberculosis	113	2,820	---	---	---	---	113	2,820
Farms on which other improved practices were adopted	598	33,723	---	---	16	157	614	33,880
Different farms on which better practices were adopted	2,309	211,168	671	103,502	135	3,883	3,115	318,553
Other livestock:								
Adult result demonstrations	39	329	---	---	1	2	40	331
Junior projects completed	157	2,455	---	---	46	1,212	203	3,667
Farms on which assistance was given in obtaining purebred sires	49	388	---	---	3	19	52	407
Farms on which assistance was given in obtaining high-grade or purebred females	43	281	---	---	4	31	47	312
Farms on which herds were culled	13	194	---	---	1	7	14	201
Associations organized during the year	16	21	---	---	1	1	17	22
Members in these associations	14	472	---	---	1	6	15	478
Breed associations organized during the year	7	7	---	---	---	---	7	7
Members in breed associations	6	92	---	---	---	---	6	92
Farms on which better-balanced rations were fed	61	947	---	---	1	2	62	949
Farms on which insect pests were controlled	38	473	---	---	---	---	38	473
Farms on which other improved practices were adopted	49	1,490	---	---	3	53	52	1,543
Different farms on which better practices were adopted	278	6,337	---	---	39	918	317	7,255
Rural engineering:								
Adult result demonstrations	1,040	20,323	162	4,082	2	22	1,204	24,427
Farms on which drainage systems (open ditches) were installed	749	6,580	---	---	1	3	750	6,583
Farms on which drainage systems (under drain) were installed	490	7,219	---	---	1	1	491	7,220
Farms on which irrigation systems were installed	224	1,805	---	---	---	---	224	1,805
Farms on which terraces were constructed	916	55,539	---	---	2	14	918	55,553
Farms on which soil-saving dams were constructed	299	5,641	---	---	1	4	300	5,645
Dwellings constructed according to plans furnished	388	1,949	180	1,106	---	---	568	3,055
Dwellings remodeled according to plans furnished	369	1,918	241	1,909	---	---	610	3,827
Sewage-disposal systems installed according to plans furnished	740	3,487	169	1,045	1	2	910	4,534
Water systems installed according to plans furnished	620	2,248	231	1,676	2	3	853	3,927
Heating systems installed according to plans furnished	99	241	79	506	---	---	178	747

Lighting systems installed according to plans furnished.....	281	1,798	186	1,653	-----	-----	467	3,451
Farms on which suggestions for maintenance and repair of machinery were followed.....	664	11,594	-----	-----	-----	10	666	11,604
Farms on which better types of machinery were employed.....	1,156	24,148	-----	-----	-----	19	1,158	24,167
Farms on which buildings other than dwellings were constructed or remodeled according to plans furnished.....	1,564	32,306	-----	-----	-----	6	1,570	32,357
Farms on which land was cleared.....	680	18,115	-----	-----	-----	1	1,681	18,116
Farms on which other improved practices were adopted.....	305	11,368	-----	-----	-----	1	306	11,376
Different farms on which better practices were adopted.....	2,185	161,165	395	10,847	-----	158	2,586	172,170
Farm management:								
Farms on which farm accounts were kept.....	1,201	25,328	-----	-----	-----	5	1,206	25,402
Farms on which recommended changes in business were made.....	795	10,745	-----	-----	-----	1	796	10,747
Other farms on which cropping, livestock, or complete farming systems were adopted according to recommendations.....	804	22,130	-----	-----	-----	1	805	22,131
Junior projects completed ²	86	7,285	-----	-----	-----	7	93	7,379
Farms on which advice was given relative to leases.....	1,064	12,792	-----	-----	-----	3	1,067	12,801
Farms on which assistance was given in keeping cost-of-production records.....	902	20,206	-----	-----	-----	2	904	20,210
Farms on which other improved practices were adopted.....	479	17,184	-----	-----	-----	1	480	17,186
Different farms on which better practices were adopted.....	1,645	88,288	-----	-----	-----	10	1,655	88,503
Credit:								
Membership in farm-loan or other credit associations organized during the year.....	85	7,940	-----	-----	-----	-----	86	7,940
Other farms on which assistance was given in obtaining credit.....	491	15,594	-----	-----	-----	2	493	15,599
Marketing:								
Cooperative marketing associations organized during the year.....	572	875	126	211	-----	2	700	1,089
Members in these associations.....	526	112,032	116	17,993	-----	2	644	130,110
Total value of purchases.....	257	3,738,748	43	28,009	-----	-----	300	3,766,757
Savings in connection with such purchases.....	239	475,510	41	6,456	-----	-----	280	481,966
Total value of sales.....	371	11,014,477	112	576,362	-----	1	484	11,590,889
Profits in connection with such sales.....	311	1,005,212	79	217,673	-----	1	391	1,222,900
Cooperative marketing associations previously organized.....	1,087	2,577	148	232	-----	-----	1,235	2,809
Members in these associations.....	948	468,482	137	55,621	-----	-----	1,085	524,103
Total value of purchases.....	656	45,692,784	22	218,455	-----	-----	678	45,911,239
Savings in connection with such purchases.....	594	4,110,171	14	43,478	-----	-----	608	4,153,649
Total value of sales.....	803	211,368,453	140	2,067,067	-----	-----	943	213,435,520
Profits in connection with such sales.....	612	15,032,783	69	422,442	-----	-----	681	15,455,225
Different farms on which improved marketing practices were adopted.....	1,367	503,622	349	77,697	-----	1	1,717	581,389
Food preparation:								
Adult result demonstrations.....	19	3,515	579	65,931	-----	3	601	69,608
Junior projects completed ²	318	10,693	904	80,879	-----	143	1,365	103,031
Women adopting improved practices in bread making.....	34	1,480	752	59,157	-----	4	790	61,056
Women adopting improved practices in meat cookery.....	71	8,058	700	59,442	-----	3	774	67,591
Women adopting improved practices in vegetable cookery.....	82	7,283	857	98,801	-----	7	946	106,271
Women adopting improved practices in preparation of dairy-product dishes.....	59	6,981	702	64,369	-----	3	764	71,482
Women adopting improved practices in meal preparation.....	73	8,656	829	100,342	-----	3	905	109,409
Homes in which the family food supply was budgeted.....	52	2,932	429	19,692	-----	14	495	23,112
Different homes in which better practices were adopted.....	309	29,382	1,130	241,102	-----	111	1,550	279,747
Food preservation:								
Adult result demonstrations.....	12	394	596	55,703	-----	3	611	56,195
Junior projects completed ²	262	5,501	831	70,025	-----	114	1,207	79,846
Women adopting improved practices in preserving fruits and vegetables.....	81	3,351	875	97,621	-----	6	962	101,199
Women adopting improved practices in preserving meats and fish.....	49	1,756	638	32,775	-----	6	693	34,583
Homes in which better food storage was provided.....	77	2,291	569	18,905	-----	34	680	21,761

² Boys' and girls' club members.

TABLE 14.—Results of cooperative extension work, 1929—Continued

Project or line of work	Reported by county agricultural agents		Reported by home demonstration agents		Reported by club agents		Total of all lines of work	
	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number	Agents reporting	Number
Food preservation—Continued.								
Different homes in which better practices were adopted.....	252	9,632	1,037	157,326	88	4,079	1,377	171,037
Quarts of food products canned.....	213	526,626	850	20,630,123	102	229,950	1,165	21,386,699
Pounds of fruits and vegetables dried.....	19	12,314	576	1,552,296	6	1,802	601	1,566,412
Pounds of meat cured.....	18	396,028	512	12,013,302	4	555	534	12,409,885
Nutrition:								
Adult result demonstrations.....	18	2,960	499	43,655	4	58	521	46,673
Junior projects completed.....	47	2,124	540	58,215	57	5,313	644	65,652
Women balancing family meals according to approved methods.....	95	17,666	645	55,044	4	106	744	72,816
Women preparing better school lunches.....	73	3,923	559	35,256	6	197	638	39,376
Schools into which the serving of a hot dish or school lunch was introduced.....	67	516	442	2,027	25	134	534	2,677
Homes in which improved practices in child feeding were adopted.....	80	7,092	595	28,710	12	640	687	36,442
Different homes in which better practices were adopted.....	158	33,493	932	170,410	44	2,340	1,134	206,243
Clothing:								
Adult result demonstrations.....	52	5,365	593	78,413	6	439	651	84,217
Junior projects completed.....	620	45,551	1,013	117,217	154	27,481	1,787	190,249
Women adopting improved practices in selection and construction.....	153	24,217	879	119,636	13	736	1,045	144,589
Women adopting improved practices in renovation and remodeling.....	90	13,103	710	62,229	4	195	804	75,527
Women adopting improved practices in millinery.....	44	3,382	555	98,955	8	40	607	97,377
Women adopting improved practices in costume designing.....	98	13,112	599	50,964	10	416	707	64,492
Women adopting improved practices in infant wardrobe planning.....	45	4,483	405	14,631	3	32	453	19,146
Women adopting improved practices in children's wardrobe planning.....	71	7,963	526	32,576	8	80	605	40,619
Women adopting improved practices in adult wardrobe planning.....	68	9,030	598	57,863	10	266	676	67,159
Different homes in which better practices were adopted.....	460	72,346	1,176	301,629	111	18,439	1,747	392,414
Dress forms made.....	35	1,648	240	6,237	4	238	279	8,123
Dresses and coats made.....	357	69,762	922	873,503	125	20,929	1,404	964,194
Undergarments made.....	354	63,386	919	888,105	122	29,453	1,395	980,944
Hats made.....	67	2,679	613	100,923	57	1,511	737	105,113
Home management:								
Adult result demonstrations.....	37	2,365	488	35,098	1	4	526	37,467
Junior projects completed.....	26	616	251	15,495	11	126	288	16,237
Women following a systematized plan of household work.....	43	4,934	368	15,599	2	505	413	21,038
Homes in which additional labor-saving equipment was obtained.....	93	6,194	831	49,760	5	556	929	56,510
Kitchens planned and rearranged for convenience.....	66	2,282	778	26,131	6	320	850	28,733
Women following improved laundry practices.....	38	1,213	377	13,676	2	10	417	14,899
Women making budgets and keeping accounts.....	27	656	380	9,925	2	10	409	10,591
Different homes in which better practices were adopted.....	130	19,125	949	106,093	15	1,151	1,094	126,369

TABLE 15.—*Extension work with boys and girls, as reported by all county extension agents, 1929*

Junior clubs.....	52,180
Different boys enrolled.....	300,509
Different girls enrolled.....	452,587
Total.....	756,096
Different boys completing.....	201,910
Different girls completing.....	305,577
Total.....	507,487

BY PROJECTS¹

Project	Boys' and girls' clubs	Boys enrolled	Girls enrolled	Boys completing	Girls completing	Units involved in club work	Quantity produced
						<i>Acres</i>	
Corn.....	1,821	40,150	1,008	25,627	593	40,991	1,640,563 bushels.
Wheat.....	35	761	6	445	2	3,259	46,645 bushels.
Oats.....	19	670	26	386	22	1,052	25,584 bushels.
Rye.....	9	205	5	77		125	2,115 bushels.
Barley.....	5	295	1	275	1	311	5,114 bushels.
Other cereals.....	30	2,914	177	1,677	92	3,967	96,489 bushels.
Alfalfa.....	43	525	32	432	31	617	854 tons.
Soybeans.....	114	1,746	115	1,318	92	1,509	{6,583 bushels. 2,177 tons.
Sweetclover.....	2	82	2	35	1	59	36 tons.
Crimson clover.....	2	29	5	27	5	31	1 ton.
Clover (red, alsike, or white).....	48	137	4	53	3	142	351 tons.
Cowpeas.....	130	1,309	14	868	11	1,067	{8,142 bushels. 1,111 tons.
Velvetbeans.....	21	218	8	164	4	194	{5,200 bushels. 141 tons.
Field beans.....	44	541	46	446	37	358	7,198 bushels.
Peanuts.....	237	5,062	248	3,026	118	3,007	96,484 bushels.
Lespedeza.....		41	1	31	1	36	51 tons.
Pastures.....	13	164	5	101	2	221	
Other legumes.....	104	1,229	50	726	27	803	{7,430 bushels. 763 tons.
Potatoes.....	981	13,620	1,426	9,759	814	4,729	463,972 bushels.
Sweetpotatoes.....	230	4,420	299	2,622	170	1,683	236,725 bushels.
Cotton.....	584	34,489	1,794	22,518	1,013	28,604	27,629,267 pounds.
Tobacco.....	118	3,502	312	2,704	205	2,220	1,598,563 pounds.
Other special crops.....	48	835	63	544	31	605	
Tree fruits.....	40	1,104	54	685	43	723	11,429 bushels.
Bush and small fruits.....	59	1,003	311	609	173	107	101,077 quarts.
Grapes.....	14	249	41	131	38	70	45,295 pounds.
Market-gardening, truck, and canning crops.....	178	3,185	751	1,937	498	1,653	98,031 bushels.
Home gardens.....	3,810	22,088	102,848	14,169	59,821	2,595	73,848 bushels.
Beautification of home grounds.....	1,883	3,692	79,002	2,246	44,109		

Project	Boys' and girls' clubs	Boys enrolled	Girls enrolled	Boys completing	Girls completing	Units involved in club work
Forestry.....	330	4,796	812	3,325	527	116,711 acres.
Dairy cattle.....	3,195	37,908	13,084	28,552	8,666	41,977 animals.
Beef cattle.....	791	10,705	1,538	8,576	1,243	12,176 animals.
Swine.....	2,231	48,381	3,348	31,215	2,165	72,869 animals.
Sheep.....	650	8,273	1,621	6,114	1,247	27,836 animals.
Poultry.....	4,297	41,045	58,819	24,797	35,223	1,882,769 birds.
Other livestock.....	289	4,255	974	2,980	687	17,103 animals.
Agricultural economics.....	393	9,423	2,388	5,678	1,701	
Food preparation.....	6,940	2,475	171,249	1,860	101,171	
Food preservation.....	5,687	469	133,102	292	78,554	{3,333,822 quarts. 158,510 pounds.
Nutrition.....	3,741	9,404	102,828	6,624	59,028	
Clothing.....	17,521	730	287,061	362	189,887	592,620 articles.
Home management.....	1,555	83	27,617	44	16,193	
House furnishings.....	2,520	304	76,361	207	40,792	
Home health and sanitation.....	4,052	11,714	119,823	6,651	71,281	
Beekeeping.....	88	977	197	657	83	4,461 swarms.
Handicraft.....	962	9,507	1,563	6,642	1,138	24,330 units.
Miscellaneous agriculture.....	196	6,229	4,122	3,017	2,222	9,332 units.
Miscellaneous home economics.....	2,901	5,332	62,713	2,894	40,372	22,226 units.
Total.....	68,961	356,275	1,257,874	234,125	760,137	

¹ One club member may engage in two or more projects. The sum of the projects is therefore greater than the number of different clubs and club members involved.

TABLE 16.—*Farmers' institutes conducted by the extension divisions of the colleges of agriculture, year ended June 30, 1929*

State	Insti- tutes	Days con- ducted	Ses- sions	Attend- ance	Different persons who gave lectures—					State ap- propria- tion used	Other funds used
					From exten- sion staff	From exper- iment sta- tion staff	From State de- part- ment of agri- cul- ture staff	From spe- cial force em- ployed for insti- tutes	Total lectur- ers		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	Dollars	Dollars
Georgia.....	18	36	72	33,000	10	-----	-----	-----	10	1,040.71	1,700.00
Indiana.....	435	497	994	158,982	4	2	1	38	45	13,594.17	19,973.93
New York.....	68	68	107	3,440	14	-----	-----	7	21	3,314.59	60.25
Ohio.....	783	1,453	3,643	690,083	3	3	-----	90	96	18,092.54	12,430.26
South Dakota....	82	103	268	24,215	7	5	-----	9	21	1,697.61	3,454.39
Tennessee.....	3	6	12	5,700	5	6	3	5	19	3,000.00	-----
West Virginia....	60	75	135	11,000	12	4	2	2	20	-----	-----
Wisconsin.....	669	695	1,179	94,872	30	3	9	41	83	30,000.00	-----
Total, 1929....	2,118	2,933	6,410	1,021,292	85	23	15	192	315	70,739.62	37,618.83
1928....	1,972	2,971	6,872	1,095,436	117	34	8	180	339	73,542.07	37,836.52
1927....	1,985	2,880	6,602	962,211	104	12	8	184	308	59,645.74	28,452.53
1926....	2,130	2,934	6,556	969,864	93	15	3	215	326	63,022.83	25,139.60
1925....	1,860	2,837	6,508	1,011,399	181	32	12	218	443	63,680.27	28,448.75

TABLE 17.—*Farmers' institutes conducted by the State departments of agriculture, year ended June 30, 1929*

State	Insti- tutes	Days con- ducted	Ses- sions	Attend- ance	Different persons who gave lectures—					State ap- propria- tion used	Other funds used
					From ex- ten- sion staff	From exper- iment sta- tion staff	From State de- part- ment of agri- cul- ture staff	From spe- cial force em- ployed for insti- tutes	Total num- ber of lectur- ers		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	Dollars	Dollars
Illinois.....	205	537	1,610	131,570	-----	37	3	144	¹ 184	30,114.14	4,865.00
Iowa.....	77	246	609	95,622	-----	-----	-----	-----	218	4,295.51	17,748.86
Maine.....	200	225	400	18,000	-----	-----	9	3	12	2,250.00	-----
Total, 1929....	482	1,008	2,619	245,192	-----	37	12	147	² 414	36,659.65	22,613.86
1928....	573	849	2,154	258,407	119	40	20	241	420	39,993.96	24,429.56
1927....	275	545	1,415	201,034	3	37	5	129	² 454	68,032.53	14,000.00
1926....	119	1,061	2,256	192,756	-----	37	12	172	² 464	70,021.46	31,452.99
1925....	890	1,451	2,434	409,693	13	34	30	204	² 431	23,182.58	31,308.60

¹ Includes 6 from other State departments than agriculture.² Includes lecturers from other sources than those mentioned.

TABLE 18.—Expenditures from the United States appropriation of May 8, 1914 (Federal Smith-Lever), for cooperative Agricultural Extension work in each State and Hawaii for the year ended June 30, 1929, by items of expense, and totals for 1915-1928

State	Total approp- riation	Personal ser- vices—sala- ries and labor	Printing, binding, and cuts for publi- cations	Supplies and materials	Communi- cation service	Transpor- tation of things	Heat, light, water, and power	Equip- ment	Travel expenses	Miscella- neous	Unex- pended balance
Alabama	\$213,041.91	\$178,180.53	\$670.30	\$8,648.87	\$3,705.15	\$440.58	\$49.50	\$4,574.91	\$16,186.82	\$585.25	-----
Arizona	33,920.44	28,637.98	965.50	308.05	88.37	36.17	-----	404.15	3,470.07	10.15	-----
Arkansas	171,397.98	95,633.81	6,818.10	1,644.44	1,804.25	352.15	-----	1,331.24	62,444.14	1,369.85	-----
California	130,921.71	103,542.46	-----	4,391.06	279.17	311.92	-----	395.64	21,437.51	563.95	-----
Colorado	63,703.73	44,555.83	2,679.54	3,717.84	956.01	142.17	-----	1,806.76	9,842.17	3.41	-----
Connecticut	59,057.58	59,057.58	-----	-----	-----	-----	-----	-----	-----	-----	-----
Delaware	21,288.65	4,526.43	837.40	2,827.77	987.58	69.68	-----	3,095.32	8,857.48	86.99	-----
Florida	77,646.71	55,825.00	3,832.33	2,387.19	430.39	11.94	-----	1,093.85	14,011.93	20.38	\$33.70
Georgia	249,382.01	190,740.28	5,925.37	7,717.82	4,067.34	159.55	1,650.00	3,993.15	33,779.86	1,348.64	-----
Hawaii	17,150.00	5,498.70	779.82	522.47	66.06	40.81	-----	2,411.11	2,418.75	46.50	5,365.78
Idaho	44,541.76	34,063.84	493.25	391.54	302.71	22.34	-----	17.90	9,249.73	.45	-----
Illinois	239,624.34	197,179.64	4,707.38	6,028.87	1,208.38	89.80	-----	4,050.77	26,045.30	314.20	-----
Indiana	169,833.14	139,901.86	3,566.60	3,794.95	1,570.00	-----	-----	306.83	20,155.75	37.15	-----
Iowa	178,775.89	175,564.08	-----	-----	-----	-----	-----	-----	3,211.81	-----	-----
Kansas	137,122.84	131,983.97	500.56	1,114.48	-----	-----	-----	830.65	2,693.18	-----	-----
Kentucky	206,883.86	76,212.94	5,180.71	5,483.53	1,655.00	643.31	3,600.00	2,193.87	108,490.89	339.98	3,083.63
Louisiana	139,226.59	132,590.22	4,027.91	749.68	99.98	2.98	-----	1,039.24	716.58	-----	-----
Maine	61,724.50	42,845.30	1,228.43	1,371.77	563.90	61.59	-----	1,463.03	14,134.48	56.00	-----
Maryland	74,068.49	63,593.17	332.15	423.22	396.02	337.65	700.00	21.00	8,227.28	38.00	-----
Massachusetts	32,316.26	31,364.18	-----	-----	5.60	-----	298.02	-----	648.46	-----	-----
Michigan	167,549.32	167,549.32	-----	-----	222.28	6.42	-----	1.75	23,270.68	2.00	-----
Minnesota	157,466.02	133,936.48	1,419.44	26.41	-----	-----	-----	-----	25,104.37	878.00	-----
Mississippi	181,201.86	153,807.05	2,504.74	3,983.47	882.63	80.47	-----	1,056.16	36,185.70	25.00	-----
Missouri	210,645.26	165,927.09	1,300.00	-----	5.45	-----	-----	-----	732.51	-----	-----
Montana	51,613.89	49,575.93	-----	-----	-----	-----	-----	423.50	-----	-----	-----
Nebraska	108,389.25	107,212.49	753.26	-----	-----	-----	-----	-----	-----	-----	-----
Nevada	16,862.72	12,341.00	212.77	1,042.23	529.57	11.36	37.10	432.80	2,235.79	20.10	-----
New Hampshire	28,033.64	26,175.84	516.44	103.18	.01	304.14	700.00	147.78	77.95	8.30	-----
New Jersey	84,378.43	48,674.02	502.09	7,653.69	1,391.05	77.09	383.28	1,386.09	23,974.09	337.03	-----
New Mexico	42,616.21	33,667.14	-----	318.61	91.19	23.20	-----	212.50	8,289.82	13.75	-----
New York	208,241.56	166,434.52	4,562.45	4,496.47	2,141.79	33.14	-----	2,399.97	27,170.24	98.80	904.18
North Carolina	238,426.37	199,069.71	-----	65.86	55.27	-----	-----	86.43	39,123.00	26.10	-----
North Dakota	71,683.39	47,447.08	2,096.43	3,531.15	720.91	10.12	-----	888.13	16,948.77	40.80	-----
Ohio	239,917.62	184,138.99	15,155.28	5,039.74	2,378.81	541.84	-----	428.56	32,056.75	177.65	-----
Oklahoma	174,389.77	122,961.97	4,796.79	6,764.44	1,832.27	-----	-----	3,173.10	34,861.20	-----	-----
Oregon	53,324.53	33,509.39	1,965.70	2,980.35	945.69	26.95	-----	1,081.39	12,788.76	26.30	-----
Pennsylvania	353,641.38	289,492.17	-----	6,360.11	2,163.16	191.30	-----	1,969.83	54,221.42	243.39	-----
Rhode Island	11,680.24	7,421.23	413.61	716.63	5.00	.13	-----	567.16	2,238.08	7.96	310.44

South Carolina.....	163,451.23	106,968.32	4,731.48	6,368.03	4,773.98	269.45	611.00	1,694.50	36,544.47	1,490.00	-----
South Dakota.....	69,037.45	69,037.45	3,252.28	2,872.73	2,404.52	479.05	1,090.31	1,049.85	34,039.30	1,520.43	-----
Tennessee.....	200,653.31	153,944.84	4,585.23	6,952.75	2,960.19	219.05	-----	194.62	67,053.10	86.89	-----
Texas.....	357,874.42	275,822.59	4,486.00	638.58	85.23	6.78	-----	36.37	3,168.11	-----	-----
Utah.....	35,816.87	31,395.80	1,798.45	3,079.64	954.21	136.60	1.44	924.37	6,000.11	413.17	-----
Vermont.....	36,770.93	23,462.94	1,798.45	7,512.11	1,356.57	431.06	75.13	21.00	14,426.88	109.29	-----
Virginia.....	190,554.95	166,521.41	101.50	4,279.02	1,250.64	312.93	-----	850.16	10,562.66	52.30	2,705.59
Washington.....	77,121.21	54,713.97	2,393.94	775.27	24.11	-----	-----	237.50	7,562.64	160.00	-----
West Virginia.....	130,873.37	121,607.46	506.39	298.93	38.11	2.28	5.00	78.54	7,060.03	-----	-----
Wisconsin.....	163,204.06	146,174.55	9,632.44	277.90	143.86	-----	-----	-----	1,601.30	-----	-----
Wyoming.....	25,133.15	23,024.27	-----	-----	-----	-----	-----	-----	-----	-----	-----
Total, 1929.....	6,172,180.80	4,913,505.82	106,232.06	127,660.85	45,542.41	5,886.00	9,200.78	47,871.48	893,319.92	10,558.16	12,403.32
1928.....	5,880,000.00	4,747,854.16	79,362.27	110,867.79	40,951.79	4,982.42	9,629.45	31,777.20	841,735.79	11,584.14	1,204.99
1927.....	5,880,000.00	4,708,815.40	81,653.50	118,545.59	49,676.60	6,275.75	10,420.66	37,492.64	854,264.87	11,291.73	1,563.26
1926.....	5,880,000.00	4,618,837.33	99,177.47	125,510.84	41,196.91	6,285.97	11,071.82	39,043.21	927,124.07	10,935.48	816.90
1925.....	5,879,999.99	4,660,134.68	91,840.89	109,079.77	35,844.59	5,662.97	6,483.13	40,018.71	918,174.14	11,845.01	916.10
1924.....	5,880,000.00	4,583,765.05	86,152.30	106,380.09	40,964.27	5,483.23	8,945.15	38,726.37	983,709.00	5,479.55	20,394.99
1923.....	5,880,000.00	4,447,492.44	113,901.41	130,029.94	40,240.02	16,097.05	9,009.22	47,247.12	1,019,854.81	6,944.88	59,183.11
1922.....	5,580,000.00	4,265,041.66	107,237.37	106,177.73	40,165.09	-----	7,914.66	40,701.62	935,937.26	7,174.06	69,650.55
1921.....	5,080,000.00	3,727,417.45	96,897.63	115,770.50	47,829.09	-----	6,269.91	50,585.69	920,621.97	8,656.26	105,951.50
1920.....	4,580,000.00	3,210,273.50	113,311.71	127,097.40	42,254.14	-----	4,614.66	48,695.97	911,947.11	6,149.87	115,655.64
1919.....	2,580,000.00	1,660,720.95	105,120.93	134,166.83	43,054.00	-----	2,618.28	91,655.52	496,439.74	5,051.79	41,171.96
1918.....	2,080,000.00	1,381,547.05	76,910.28	109,656.02	39,627.12	-----	2,412.57	61,433.27	394,481.91	1,998.07	11,933.71
1917.....	1,580,000.00	1,140,061.93	43,927.84	52,587.62	20,041.81	-----	1,338.98	36,881.97	278,867.24	1,346.99	4,945.62
1916.....	1,080,000.00	755,165.64	27,867.77	40,863.34	12,154.06	-----	968.63	39,404.50	201,084.45	415.34	2,076.27
1915.....	480,000.00	329,143.14	8,241.16	15,463.39	5,539.85	-----	146.85	19,769.52	96,402.41	228.41	5,065.27

¹ Prior to 1923, transportation of things included in communication service.

TABLE 19.—Expenditures from the United States appropriation of May 8, 1914 (State Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by items of expense, and totals for 1916-1928

State	Total approp- riation	Personal ser- vices—sala- ries and labor	Printing, binding, and cuts for publi- cations	Supplies and materials	Communi- cation service	Transpor- tation of things	Heat, light, water, and power	Equip- ment	Travel ex- penses	Miscel- laneous	Unex- pended balance
Alabama.....	\$203,041.91	\$167,211.18	\$3,852.19	\$786.52	\$138.89	\$43.71	\$4.50	\$1,539.62	\$29,452.80	\$12.50	-----
Arizona.....	23,920.44	18,045.38	894.17	1,190.06	281.93	69.36	-----	253.63	3,185.91	-----	-----
Arkansas.....	161,397.98	156,718.51	135.30	37.66	1,007.19	-----	-----	711.58	37.44	2,750.30	-----
California.....	120,921.71	120,921.71	-----	-----	-----	-----	-----	431.93	8,944.39	8.19	-----
Colorado.....	53,703.73	42,077.55	249.36	1,157.66	760.78	73.87	-----	-----	13,393.94	-----	-----
Connecticut.....	49,057.58	35,079.89	-----	-----	577.75	-----	-----	-----	500.66	-----	-----
Delaware.....	11,288.65	10,742.31	-----	9.62	36.06	-----	-----	-----	11,551.30	23.00	\$33.70
Florida.....	67,646.71	54,011.64	-----	872.54	95.84	8.05	-----	1,050.64	14,619.05	912.50	-----
Georgia.....	239,382.01	223,514.23	-----	253.35	80.28	-----	-----	2.60	19.30	30.16	5,365.78
Hawaii.....	7,150.00	-----	-----	-----	102.69	12.30	-----	1,632.07	4,524.85	-----	-----
Idaho.....	34,541.76	28,152.60	276.50	1,005.07	570.44	-----	-----	-----	-----	-----	-----
Illinois.....	229,624.34	229,624.34	-----	-----	-----	-----	-----	-----	-----	-----	-----
Indiana.....	159,833.14	159,833.14	-----	-----	-----	-----	-----	-----	-----	-----	-----
Iowa.....	168,775.89	168,775.89	-----	-----	-----	-----	-----	-----	-----	-----	-----
Kansas.....	127,122.84	94,542.38	-----	51.90	-----	-----	-----	-----	32,472.31	56.25	-----
Kentucky.....	196,883.86	193,800.23	-----	-----	-----	-----	-----	-----	-----	-----	3,083.63
Louisiana.....	129,226.59	81,580.42	3,945.40	5,976.91	1,040.95	303.67	149.63	9,144.49	26,863.66	221.46	-----
Maine.....	51,724.50	25,509.85	-----	1,945.39	405.74	72.01	-----	1,184.36	22,567.85	39.30	-----
Maryland.....	64,068.49	53,208.21	929.06	1,928.44	706.77	1,081.92	-----	372.43	5,767.36	74.30	-----
Massachusetts.....	22,316.26	22,316.26	-----	-----	-----	-----	-----	-----	-----	-----	-----
Michigan.....	157,549.32	157,549.32	-----	-----	-----	-----	-----	-----	-----	-----	-----
Minnesota.....	147,466.02	143,213.02	-----	4.35	19.71	.92	-----	-----	4,228.02	-----	-----
Mississippi.....	171,201.86	158,319.19	-----	4,380.72	1,862.93	239.50	687.41	1,786.98	3,849.13	76.00	-----
Missouri.....	200,645.26	157,239.78	3,085.13	4,144.81	954.50	82.67	-----	319.64	34,745.90	72.83	-----
Montana.....	41,613.89	40,452.72	-----	-----	5.50	-----	-----	-----	1,155.67	-----	-----
Nebraska.....	98,389.25	70,398.27	383.33	6,663.95	2,189.63	182.21	-----	1,223.27	17,114.94	233.65	-----
Nevada.....	6,862.72	5,043.00	-----	463.14	105.57	6.41	-----	151.88	1,092.72	-----	-----
New Hampshire.....	18,033.64	18,033.64	-----	-----	-----	-----	-----	-----	-----	-----	-----
New Jersey.....	74,378.43	74,166.36	-----	-----	212.07	-----	-----	-----	-----	-----	-----
New Mexico.....	32,616.21	23,043.42	2,059.87	1,977.33	739.76	307.54	500.00	1,063.52	2,881.33	43.44	904.18
New York.....	198,241.56	197,337.38	-----	-----	-----	-----	-----	3,202.46	39,193.32	919.31	-----
North Carolina.....	228,426.37	172,712.57	4,881.31	4,813.60	2,298.93	397.71	7.16	363.30	27,181.40	-----	-----
North Dakota.....	61,683.39	57,634.91	842.67	342.51	-----	-----	2,500.00	-----	466.16	-----	-----
Ohio.....	229,917.62	202,736.22	-----	-----	-----	-----	-----	-----	-----	-----	-----
Oklahoma.....	164,389.77	163,381.79	195.00	239.28	107.54	-----	-----	-----	-----	-----	-----
Oregon.....	43,324.53	43,324.53	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pennsylvania.....	343,641.38	217,788.83	3,635.99	3,929.13	7,152.07	93.94	1,541.99	1,848.21	98,595.22	9,056.00	-----
Rhode Island.....	1,680.24	524.22	71.00	365.17	127.54	39.86	-----	62.41	178.51	1.09	310.44

South Carolina	153, 451. 23	2, 445. 16	6, 947. 08	1, 559. 80	306. 91			1, 594. 93	22, 611. 78	255. 20	
South Dakota	59, 037. 45	3, 086. 31	4, 495. 09	24. 00	32. 00			370. 60		. 58	
Tennessee	190, 653. 31	1, 051. 03									
Texas	347, 874. 42	368. 07									
Utah	25, 816. 87		281. 83	21. 00	12. 52			984. 14	58, 461. 68		
Vermont	26, 770. 93		314. 26	6. 93	5. 69			654. 85	783. 12		
Virginia	180, 554. 95	9, 563. 05	658. 97	761. 46					2, 589. 13	34. 75	
Washington	67, 121. 21	1, 456. 65	1, 952. 50	575. 82	264. 53			319. 45	49, 852. 15		
West Virginia	120, 873. 37							20. 22	10, 569. 41	56. 90	2, 705. 59
Wisconsin	153, 204. 06	2, 652. 95	4, 895. 61	2, 553. 25	166. 32			1, 732. 00	29, 588. 64	65. 12	
Wyoming	15, 133. 15		9. 46								
Total, 1929	5, 682, 180. 80	46, 059. 50	62, 093. 91	27, 083. 32	3, 803. 62	5, 770. 91	32, 000. 99	579, 788. 78	14, 942. 83	12, 403. 32	
1928	5, 400, 000. 00	40, 461. 46	42, 744. 30	26, 028. 16	2, 331. 92	5, 237. 79	18, 891. 78	545, 679. 20	8, 034. 92	1, 204. 99	
1927	5, 400, 000. 00	58, 334. 29	44, 348. 94	26, 237. 92	2, 412. 33	4, 628. 74	13, 385. 53	540, 365. 54	8, 089. 82	1, 563. 26	
1926	5, 400, 000. 00	42, 923. 43	47, 014. 19	30, 780. 71	4, 717. 07	5, 051. 17	10, 962. 57	538, 576. 17	7, 465. 67	816. 90	
1925	5, 399, 999. 99	44, 447. 40	51, 852. 67	25, 662. 11	2, 755. 91	4, 724. 92	12, 666. 14	584, 930. 38	7, 413. 94	916. 10	
1924	5, 400, 000. 00	60, 057. 95	46, 053. 65	29, 212. 57	4, 409. 56	6, 075. 61	17, 207. 77	508, 349. 42	11, 220. 40	20, 394. 99	
1923	5, 400, 000. 00	51, 890. 13	49, 671. 43	25, 956. 13	14, 257. 77	4, 827. 45	22, 819. 11	520, 258. 46	5, 272. 14	59, 183. 11	
1922	5, 100, 000. 00	74, 254. 76	49, 834. 16	27, 459. 91		5, 105. 09	24, 684. 34	587, 035. 78	7, 187. 79	69, 650. 52	
1921	4, 600, 000. 00	76, 823. 58	40, 298. 04	16, 461. 40		3, 104. 69	21, 019. 47	484, 159. 39	1, 393. 41	105, 951. 54	
1920	4, 100, 000. 00	58, 956. 38	46, 471. 18	26, 754. 12		3, 357. 21	18, 452. 15	440, 221. 83	7, 503. 05	115, 655. 50	
1919	2, 100, 000. 00	55, 540. 79	77, 990. 43	28, 237. 75		2, 824. 06	33, 157. 82	369, 769. 41	6, 522. 71	41, 171. 96	
1918	1, 600, 000. 00	40, 130. 89	46, 437. 58	20, 826. 08		3, 052. 65	24, 613. 74	259, 998. 19	3, 486. 85	11, 933. 71	
1917	1, 100, 000. 00	34, 822. 25	32, 507. 55	12, 441. 66		232. 44	17, 015. 59	171, 145. 06	1, 884. 86	4, 945. 66	
1916	600, 000. 00	15, 198. 34	21, 505. 74	5, 397. 94		223. 28	11, 758. 17	87, 038. 02	1, 331. 24	2, 076. 27	

¹ Prior to 1923, transportation of things included in communication service.

TABLE 20.—*Expenditures from the United States appropriation of May 8, 1914 (Federal Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928*

State	Total	Adminis- tration	Printing and dis- tribution of publi- cations	County agent work	Home dem- onstration work ¹	Boys' and girls' club work	Home- econom- ics spe- cialists ^{2 3}	Exten- sion schools
Alabama.....	\$213,041.91	\$8,247.37	\$967.65	\$97,997.60	\$52,888.43	\$4,967.82	-----	\$4,096.89
Arizona.....	33,920.44	2,291.85	965.50	10,017.27	7,339.71	31.04	-----	-----
Arkansas.....	171,397.98	8,914.59	6,818.10	69,931.29	48,057.07	4,501.63	-----	2,124.21
California.....	130,921.71	7,220.53	-----	63,895.13	49,580.70	6,593.97	-----	-----
Colorado.....	63,703.73	4,138.09	2,679.54	21,538.18	4,398.57	5,257.41	-----	-----
Connecticut.....	59,057.58	5,252.00	-----	8,035.20	7,130.00	7,739.73	\$2,600.00	-----
Delaware.....	21,288.65	5,936.89	903.67	6,264.12	2,998.78	3,943.11	-----	-----
Florida.....	77,646.71	7,487.64	3,832.33	40,591.38	2,786.73	5,031.97	-----	81.87
Georgia.....	249,382.01	10,575.48	5,925.37	104,246.73	51,125.38	10,555.18	-----	-----
Hawaii.....	17,150.00	3,507.47	852.13	3,348.74	4,075.88	-----	-----	-----
Idaho.....	44,541.76	3,456.80	493.25	17,242.41	8,751.54	420.00	-----	-----
Illinois.....	239,624.34	22,898.34	4,778.77	80,678.74	48,082.58	15,421.99	3,235.59	-----
Indiana.....	169,833.14	13,084.97	3,566.60	48,417.47	7,303.13	18,241.29	-----	3,833.58
Iowa.....	178,775.89	11,980.00	-----	76,780.89	13,248.00	17,748.00	-----	-----
Kansas.....	137,122.84	10,577.45	1,223.75	69,896.63	20,149.13	7,484.15	1,908.97	86.65
Kentucky.....	206,883.86	6,481.57	6,842.94	117,236.19	18,000.57	11,001.25	-----	2,706.48
Louisiana.....	139,226.59	6,888.47	4,027.91	73,473.62	38,094.41	5,825.00	-----	-----
Maine.....	61,724.50	8,628.77	1,228.43	22,358.61	21,840.57	-----	-----	-----
Maryland.....	74,068.49	5,570.37	332.15	37,167.93	15,822.91	1,533.21	-----	-----
Massachusetts.....	32,316.26	600.00	-----	6,435.97	1,578.55	6,698.08	-----	-----
Michigan.....	167,549.32	-----	-----	118,113.25	13,810.00	32,748.16	-----	-----
Minnesota.....	157,466.02	11,962.24	-----	60,654.03	5,579.96	22,294.43	-----	-----
Mississippi.....	181,201.86	7,323.59	1,419.44	65,741.73	43,456.29	7,698.61	-----	-----
Missouri.....	210,645.26	7,312.88	3,725.33	115,116.76	11,897.80	10,716.75	1,911.72	-----
Montana.....	51,613.89	5,842.42	1,300.00	28,671.60	7,525.00	2,449.87	-----	-----
Nebraska.....	108,389.25	6,678.50	1,093.26	43,003.59	2,110.00	7,145.32	-----	-----
Nevada.....	16,862.72	10,720.28	212.77	4,729.67	-----	-----	-----	-----
New Hampshire.....	28,033.64	10,707.63	520.58	6,880.12	3,170.00	1,784.91	-----	-----
New Jersey.....	84,378.43	14,038.92	502.09	18,288.79	8,875.18	7,616.63	-----	-----
New Mexico.....	42,616.21	3,106.29	-----	12,513.21	8,386.57	-----	-----	-----
New York.....	208,241.56	7,081.63	4,562.45	46,231.41	36,986.32	20,347.09	5,208.72	1,926.19
North Carolina.....	238,426.37	4,012.16	-----	148,492.07	85,922.14	-----	-----	-----
North Dakota.....	71,683.39	11,958.18	2,344.43	25,823.44	3,216.57	4,228.61	-----	-----
Ohio.....	239,917.62	16,841.56	15,155.28	92,388.92	14,245.01	9,127.23	4,148.55	-----
Oklahoma.....	174,389.77	11,460.44	4,796.79	79,523.55	61,749.43	2,478.08	-----	-----
Oregon.....	53,324.53	10,864.45	1,965.70	9,446.32	2,743.30	11,930.17	-----	-----
Pennsylvania.....	353,641.38	25,095.99	-----	177,058.83	14,829.64	13,728.26	1,853.71	-----
Rhode Island.....	11,680.24	2,230.88	413.61	1,175.40	2,069.17	3,229.85	-----	-----
South Carolina.....	163,451.23	17,931.07	4,731.48	48,994.71	28,090.28	8,556.34	-----	-----
South Dakota.....	69,037.45	5,000.00	-----	17,751.19	14,814.99	5,286.65	-----	-----
Tennessee.....	200,653.31	15,415.03	3,434.78	115,175.36	49,500.85	1,215.66	714.87	234.56
Texas.....	357,874.42	28,730.36	4,585.23	171,383.48	106,176.51	-----	-----	-----
Utah.....	35,816.87	4,147.82	516.00	17,230.23	3,299.41	2,516.31	-----	-----
Vermont.....	36,770.93	6,627.12	1,798.45	7,609.82	5,276.15	5,065.60	-----	-----
Virginia.....	190,554.95	17,861.71	101.50	128,529.75	31,452.33	8,778.35	-----	-----
Washington.....	77,121.21	16,946.17	2,393.94	25,245.11	8,173.08	7,489.88	-----	-----
West Virginia.....	130,873.37	10,856.21	1,237.39	69,724.85	25,206.68	11,873.27	-----	-----
Wisconsin.....	163,204.06	13,061.46	14,065.88	46,018.07	6,988.61	8,560.04	-----	-----
Wyoming.....	25,133.15	8,133.14	-----	8,458.59	2,026.46	725.00	-----	-----
Total, 1929...	6,172,180.80	465,686.78	116,314.47	2,685,527.95	1,030,830.37	350,585.80	21,582.13	15,090.43
1928...	5,880,000.00	467,466.38	91,233.78	2,652,167.00	1,021,850.25	372,020.37	35,189.04	13,273.50
1927...	5,880,000.00	474,287.82	112,201.26	2,561,832.81	1,007,869.10	364,487.44	43,474.59	28,871.39
1926...	5,880,000.00	514,714.28	143,188.39	2,565,351.10	964,378.07	358,598.55	52,729.07	33,037.96
1925...	5,879,999.99	489,334.58	129,589.83	2,545,660.14	923,732.64	395,996.33	75,683.11	25,285.69
1924...	5,880,000.00	567,299.02	107,430.35	2,499,648.20	885,351.85	347,032.94	362,896.50	25,595.61
1923...	5,880,000.00	560,818.85	134,982.11	2,484,671.37	885,893.81	388,141.33	321,699.57	27,557.00
1922...	5,580,000.00	534,939.13	107,237.37	2,585,672.90	690,124.03	367,674.18	223,457.69	24,013.74
1921...	5,080,000.00	510,671.70	96,897.63	2,314,067.79	643,712.65	338,121.77	163,028.85	29,275.33
1920...	4,580,000.00	497,185.75	113,328.01	1,980,498.67	643,380.58	319,561.57	169,269.04	35,041.37
1919...	2,580,000.00	497,041.99	105,120.93	655,145.98	395,631.98	143,219.87	-----	46,439.03
1918...	2,080,000.00	390,545.48	76,910.28	584,815.72	356,475.39	112,076.34	-----	44,515.12
1917...	1,580,000.00	249,738.80	43,881.48	453,417.17	261,229.14	105,290.22	-----	69,425.12
1916...	1,080,000.00	177,213.30	27,867.77	289,708.77	174,753.22	63,189.11	-----	63,125.80
1915...	480,000.00	86,278.39	8,241.16	128,083.33	69,890.05	32,944.29	-----	33,821.65

¹ Prior to 1920 included in home-economics specialists.² Prior to 1920 included under home demonstration work.³ Prior to 1925 included foods and nutrition, home management, and clothing.

TABLE 20.—*Expenditures from the United States appropriation of May 8, 1914 (Federal Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued*

State	Animal hus- bandry	Poultry	Dairying	Animal diseases	Agron- omy	Foods and nu- trition ⁴	Child care and train- ing	Home manage- ment
Alabama.....	\$4,634.95	\$4,634.94	\$4,634.95	-----	\$3,245.24	\$3,000.00	-----	-----
Arizona.....	3,885.91	1,267.09	1,267.09	-----	4,433.85	-----	-----	-----
Arkansas.....	2,613.94	2,329.51	3,070.77	-----	2,636.66	4,389.38	-----	-----
California.....	-----	-----	-----	-----	-----	-----	-----	-----
Colorado.....	3,094.42	2,913.04	1,996.59	-----	4,046.12	2,132.94	-----	\$957.15
Connecticut.....	-----	-----	8,308.00	-----	4,000.00	-----	-----	2,500.00
Delaware.....	-----	-----	-----	-----	-----	529.86	-----	-----
Florida.....	-----	4,687.43	5,193.36	-----	-----	-----	-----	-----
Georgia.....	9,422.39	9,470.29	2,152.07	\$667.85	15,098.13	-----	-----	2,834.69
Hawaii.....	-----	-----	-----	-----	-----	-----	-----	-----
Idaho.....	2,994.14	2,440.00	3,148.95	-----	1,645.30	-----	-----	-----
Illinois.....	6,173.77	3,667.88	7,612.17	2,320.99	9,697.93	3,831.87	\$3,046.91	4,123.72
Indiana.....	12,567.63	7,559.65	12,715.27	-----	9,483.63	6,152.19	-----	-----
Iowa.....	-----	-----	9,820.00	-----	-----	9,400.00	-----	15,040.00
Kansas.....	-----	-----	31.10	2,029.04	229.27	4,426.81	-----	1,878.46
Kentucky.....	3,512.47	2,784.69	2,708.57	4,137.29	2,437.28	2,065.74	-----	-----
Louisiana.....	3,534.85	1,480.23	925.59	-----	-----	-----	-----	-----
Maine.....	-----	3,618.12	-----	-----	-----	-----	-----	-----
Maryland.....	1,128.07	1,381.22	2,095.98	-----	1,757.56	-----	-----	-----
Massachusetts.....	1,700.00	1,799.75	-----	-----	1,700.00	1,800.00	-----	1,431.00
Michigan.....	-----	1,800.00	-----	-----	1,077.91	-----	-----	-----
Minnesota.....	9,392.58	5,160.00	14,483.92	3,423.75	1,650.00	3,613.50	-----	2,124.94
Mississippi.....	4,528.33	5,952.15	8,355.12	-----	-----	3,437.88	-----	3,653.38
Missouri.....	7,920.24	5,326.91	5,545.98	-----	13,358.28	2,453.54	-----	4,418.18
Montana.....	-----	1,200.00	-----	-----	-----	1,200.00	-----	1,675.00
Nebraska.....	4,870.00	5,980.00	3,677.23	-----	5,790.00	4,680.00	-----	3,875.00
Nevada.....	-----	-----	-----	-----	-----	-----	-----	-----
New Hampshire.....	-----	-----	-----	-----	-----	-----	-----	2,800.00
New Jersey.....	-----	4,897.09	4,459.96	-----	1,648.60	1,064.50	-----	1,832.80
New Mexico.....	4,884.83	2,444.33	2,444.34	-----	5,495.60	-----	-----	-----
New York.....	8,167.56	10,718.92	20.15	-----	6,206.79	8,352.58	-----	12,232.68
North Carolina.....	-----	-----	-----	-----	-----	-----	-----	-----
North Dakota.....	2,170.16	951.76	1,438.74	1,563.01	2,079.76	4,071.55	-----	1,445.28
Ohio.....	10,946.16	4,616.59	1,994.12	-----	13,532.29	4,229.72	-----	2,275.06
Oklahoma.....	1,029.66	2,527.69	2,097.84	-----	1,238.31	1,299.24	-----	-----
Oregon.....	1,149.37	677.11	1,450.42	-----	1,239.37	1,130.40	-----	-----
Pennsylvania.....	17,479.18	7,886.65	31,229.77	-----	21,776.21	-----	-----	-----
Rhode Island.....	524.73	506.15	-----	-----	525.14	-----	-----	-----
South Carolina.....	4,914.79	7,046.12	6,962.10	-----	3,081.32	6,934.00	-----	-----
South Dakota.....	1,349.97	833.32	3,245.00	3,400.00	3,400.00	6,088.00	-----	-----
Tennessee.....	3,295.15	1,848.49	1,910.26	-----	1,079.96	1,011.74	-----	-----
Texas.....	6,628.13	2,593.77	2,582.04	-----	2,236.19	2,572.62	-----	5,919.55
Utah.....	1,922.26	849.96	-----	-----	1,855.26	225.00	-----	1,440.95
Vermont.....	-----	1,976.72	1,917.70	-----	1,800.74	-----	-----	2,993.70
Virginia.....	42.27	-----	234.24	-----	344.71	-----	-----	-----
Washington.....	1,230.14	1,300.70	350.43	-----	2,355.11	1,227.37	-----	1,614.55
West Virginia.....	3,547.30	3,400.00	3,288.94	-----	24.35	-----	-----	-----
Wisconsin.....	4,189.23	5,877.77	4,645.52	-----	13,576.91	6,020.63	-----	7,506.36
Wyoming.....	625.00	1,283.32	625.00	-----	1,050.00	1,030.00	-----	-----
Total, 1929.....	156,069.63	137,689.36	168,639.28	17,541.93	166,833.78	98,371.06	3,046.91	84,572.45
1928.....	135,317.99	111,494.68	150,994.24	16,335.29	139,049.89	87,358.18	-----	55,785.95
1927.....	156,911.94	121,739.30	142,608.92	15,013.11	149,780.57	87,320.54	-----	61,630.23
1926.....	136,255.72	106,794.63	150,440.07	14,738.70	151,594.87	100,227.86	-----	43,650.54
1925.....	164,480.17	115,788.09	169,368.58	13,478.82	174,800.00	78,561.76	-----	34,351.92
1924.....	127,715.52	115,383.23	146,225.26	15,058.10	192,313.17	-----	-----	-----
1923.....	135,853.68	112,673.45	149,978.94	13,828.80	178,711.34	-----	-----	-----
1922.....	151,306.74	104,173.38	149,102.80	15,052.24	155,850.69	-----	-----	-----
1921.....	117,477.14	83,263.80	151,544.79	14,183.78	124,471.96	-----	-----	-----
1920.....	87,871.04	67,003.77	102,469.90	12,947.38	97,415.30	-----	-----	-----
1919.....	93,866.43	59,589.20	85,229.65	14,524.65	101,141.49	-----	-----	-----
1918.....	68,268.80	40,519.09	67,341.75	14,790.71	75,316.76	-----	-----	-----
1917.....	59,018.49	26,507.94	49,536.76	11,807.83	56,668.96	-----	-----	-----
1916.....	30,305.43	21,168.07	38,365.08	9,593.93	35,352.22	-----	-----	-----
1915.....	8,640.84	5,735.83	16,269.72	3,930.67	9,191.99	-----	-----	-----

⁴ Prior to 1925 included under home economics.

TABLE 20.—*Expenditures from the United States appropriation of May 8, 1914 (Federal Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued*

State	Clothing ⁴	Horticulture	Botany and plant pathology	Entomology, apiculture, ornithology	Rodent pests	Forestry	Agricultural engineering
Alabama.....	\$3,013.42	\$3,474.65		\$2,994.06			\$7,607.70
Arizona.....		765.00	\$974.16	681.97			
Arkansas.....	2,173.33	2,733.65				\$700.98	
Colorado.....	2,990.36	1,312.19					
Connecticut.....	2,600.00	5,439.32					
Delaware.....			325.08	387.14			
Florida.....		2,000.00	3,337.05				
Georgia.....	3,104.60	843.80				577.07	562.30
Idaho.....	1,535.70	1,955.33		458.34			
Illinois.....	3,427.46	6,513.82					2,760.11
Indiana.....	5,983.74	7,355.79	7,596.09				2,325.29
Iowa.....	12,580.00						
Kansas.....	6,201.04	85.46	132.04	143.50	\$71.73		6,590.28
Kentucky.....	1,746.88	2,527.23					5,510.91
Louisiana.....	713.07	1,425.00		1,242.68		8.53	
Maryland.....		3,566.28	1,027.85	827.22			
Massachusetts.....	1,600.00	5,419.50					
Minnesota.....	6,822.28		3,589.49				
Mississippi.....		9,114.72					1,735.16
Missouri.....	7,414.63	1,343.26					4,135.17
Montana.....	1,750.00						
Nebraska.....	4,160.00	3,250.00					6,396.35
New Jersey.....	4,954.83	4,545.44				1,492.02	705.77
New Mexico.....		1,575.40					
New York.....	7,419.14	2,290.64	11,423.86	4,988.37		1,344.07	5,721.99
North Dakota.....	6,412.17						1,443.94
Ohio.....	7,046.61	8,738.01	6,396.78	9,287.80			4,678.68
Oklahoma.....	1,068.63	1,650.23		730.05			1,593.31
Oregon.....		1,991.26					637.75
Pennsylvania.....		23,778.57	1,300.32	2,206.61		596.85	
Rhode Island.....		694.87					
South Carolina.....		8,160.30		6,931.62			1,540.66
South Dakota.....	166.66	2,267.00		1,133.00			875.00
Tennessee.....	785.01	1,107.16					
Texas.....	3,257.68	2,593.54		2,548.61			2,516.54
Utah.....	1,813.67						
Vermont.....		349.15				19.57	
Virginia.....		44.15					
Washington.....	1,108.62	1,082.06					1,261.85
West Virginia.....		1,090.87	98.69			87.60	
Wisconsin.....	8,779.85	8,255.77	5,492.90				1,998.98
Wyoming.....	1,176.64						
Total, 1929.....	111,806.02	129,339.42	41,694.31	34,560.97	71.73	4,826.69	60,597.74
1928.....	95,965.00	92,417.32	38,474.93	25,381.16	3.89	3,804.14	39,587.70
1927.....	110,290.84	105,266.57	39,634.31	32,495.76		4,472.60	42,761.71
1926.....	114,818.52	109,260.26	48,146.55	30,840.72		1,230.03	48,034.13
1925.....	98,595.84	114,473.14	46,623.74	27,010.41	1,737.91	7,053.51	51,688.86
1924.....		105,347.12	54,154.16	49,340.16	2,711.31	9,184.80	59,303.95
1923.....		113,766.16	54,351.72	30,060.01	2,244.63	4,526.43	54,910.50
1922.....		119,494.94	42,662.39	27,482.48	600.00	409.84	57,612.13
1921.....		120,881.01	39,347.39	31,290.85	550.00	1,183.59	75,761.33
1920.....		94,734.69	38,021.20	23,249.32		2,248.18	58,678.38
1919.....		89,593.31	40,819.23	21,307.37	388.18	2,089.12	50,945.46
1918.....		73,870.57	24,800.53	7,659.64	864.25	1,201.41	24,119.45
1917.....		45,773.14	11,691.68	7,957.23		4,591.58	21,730.76
1916.....		42,949.87	6,801.49	4,603.57		358.45	15,680.02
1915.....		16,309.53	400.00	440.00			1,180.15

⁴ Prior to 1925 included under home economics.

TABLE 20.—Expenditures from the United States appropriation of May 8, 1914 (Federal Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued

State	Farm manage- ment	Rural or- ganization	Marketing	Exhibits and fairs	Publicity	Miscella- neous specialists	Unex- pended balance
Alabama.....				\$1,600.38	\$5,035.96		
Arkansas.....			\$2,577.92		7,824.95		
California.....	\$3,631.38						
Colorado.....	2,529.35				3,719.78		
Connecticut.....	920.00		1,283.33		3,250.00		
Florida.....					2,583.25		\$33.70
Georgia.....	3,150.37		2,377.32	3,266.40	13,427.59		
Hawaii.....							5,365.78
Illinois.....	7,488.66		160.55		3,702.49		
Indiana.....	3,646.77						
Iowa.....	4,000.00		8,179.00				
Kansas.....	1,876.29		88.65		2,012.44		
Kentucky.....	1,136.67		8,074.60		4,888.90		3,083.63
Louisiana.....		\$703.45	694.46		189.32		
Maine.....					4,050.00		
Maryland.....			212.50		1,645.24		
Massachusetts.....	1,200.00		53.41		300.00		
Minnesota.....	4,104.90		1,650.00		960.00		
Mississippi.....		5,142.73	12,442.73		1,200.00		
Missouri.....	2,517.99	2,070.45	1,310.08		2,149.31		
Nebraska.....	1,540.00		2,625.00		1,515.00		
Nevada.....					1,200.00		
New Hampshire.....	2,170.40						
New Jersey.....	3,622.50				5,833.31		
New Mexico.....	1,765.64						
New York.....	5,842.02	193.75			71.05		904.18
North Dakota.....	1,230.59				1,305.20		
Ohio.....	7,940.11		6,072.66		256.48		
Oklahoma.....	1,138.02				8.50		
Oregon.....	1,106.16		6,323.02		669.73		
Pennsylvania.....	10,594.42	408.79	817.58		3,000.00		
Rhode Island.....							310.44
South Carolina.....			8,820.43		756.01		
South Dakota.....	226.67		3,200.00				
Tennessee.....	1,985.13		1,267.67		671.63		
Texas.....		6,286.39			7,263.78		
Vermont.....	1,336.21						
Virginia.....					3,165.94		
Washington.....	1,467.71			74.50	1,094.40		2,705.59
West Virginia.....		437.22					
Wisconsin.....	96.11		8,069.97				
Total, 1929.....	78,264.07	15,242.78	76,300.88	4,941.28	83,749.26		12,403.32
1928.....	72,516.80	11,747.46	67,601.03	8,751.05	73,007.99		1,204.99
1927.....	67,584.98	10,864.70	75,217.67	13,861.99	47,164.38	\$792.21	1,563.26
1926.....	71,573.86	10,918.77	76,060.11	14,347.13	17,736.55	516.66	816.90
1925.....	82,053.25	14,044.63	75,929.93	8,437.00	15,324.01		916.10
1924.....	59,855.15	24,304.54	91,555.31	5,677.10	6,221.66		20,394.99
1923.....	63,497.82	13,395.83	86,237.42	2,670.14		345.98	59,183.11
1922.....	65,492.11	4,552.23	70,812.25	1,647.17		10,979.02	69,650.55
1921.....	45,856.28	7,313.30	61,357.69	499.98		3,289.89	105,951.50
1920.....	45,260.73	8,660.11	61,803.38	1,723.91		3,992.08	115,655.64
1919.....	48,087.69	20,794.66	57,132.80	1,943.32		8,775.70	41,171.96
1918.....	34,733.81	15,744.60	33,629.68	2,680.84		17,186.07	11,933.71
1917.....	32,786.96	10,510.03	18,374.98	2,455.40		32,660.70	4,945.63
1916.....	34,004.56	3,197.59	7,204.80	748.84		31,731.84	2,076.27
1915.....	4,369.31	126.00	2,298.60	3,712.95		43,070.27	5,065.27

TABLE 21.—Expenditures from the United States appropriation of May 8, 1914 (State Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1916-1928

State	Total	Admin- istration	Printing and dis- tribution of publi- cations	County agent work	Home demon- stration work ¹	Boys' and girls' club work	Home econom- ics ^{2,3}	Exten- sion schools	Animal husband- ry	Poultry	Dairying	Animal diseases	Agron- omy	Foods and nu- trition ⁴	Home manage- ment ⁴
Alabama	\$203,041.91	\$11,189.54	\$4,066.23	\$102,614.48	\$52,011.36	\$2,002.73			\$1,543.59	\$1,543.58	\$1,543.59		\$1,008.80	\$1,258.41	\$4,003.07
Arizona	23,920.44	10,087.12	894.17	5,869.37	3,806.41	27.27			1,140.55	502.59	695.36		853.53		
Arkansas	161,397.98	7,805.08	135.30	85,465.27	49,232.87	702.00		\$12.66	1,750.00	1,288.33	2,072.00		1,752.00	2,710.00	
California	120,921.71			105,524.84		15,396.87									
Colorado	53,703.73	5,934.74	249.36	28,631.32	3,321.07	2,619.63			2,493.63	1,710.51	311.91		2,340.87	1,512.88	119.84
Connecticut	49,057.58	3,479.23	2,610.00	1,157.05	327.82	4,505.35	\$837.75			9,692.53	1,945.59		1,087.89	5,272.97	1,794.84
Delaware	11,288.65	4,784.93		3,007.09	1,690.00	1,556.63								250.00	
Florida	67,646.71			22,956.98	40,647.58									4,008.45	
Georgia	239,382.01	10,201.94		93,541.96	72,190.94	5,810.34			2,038.11	1,343.15	8,205.30	\$1,800.00	4,266.15	3,172.66	728.59
Hawaii	7,150.00	778.15		1,006.07		442.00			1,720.00	1,390.00	880.00		1,584.51		
Idaho	34,541.76	3,570.14	276.50	15,642.79	5,654.61										
Illinois	229,624.34			229,624.34											
Indiana	159,833.14			159,833.14											
Iowa	168,775.89			161,442.18	7,333.71										
Kansas	127,122.84	3,688.70	2,115.00	41,889.34	2,881.57	3,574.59	1,938.40	1,879.08	8,781.91	8,369.99	6,715.00	1,765.99	12,263.42	2,119.71	1,903.42
Kentucky	196,883.86	13,066.67	810.00	76,495.66	22,225.05	21,020.00		4,776.17	11,260.01	9,520.01	4,425.00		8,260.00	5,018.34	
Louisiana	129,226.59	24,886.45	3,945.40	38,319.84	16,642.46	4,430.30			2,462.15	7,303.90	3,621.72				
Maine	51,724.50	2,501.11		14,355.46		10,251.56					3,812.67		4,398.77	3,062.89	2,923.68
Maryland	64,068.49	7,290.56	929.06	25,031.05	9,861.00	3,002.24			3,117.29	2,913.85	2,955.14		3,019.79		
Massachusetts	22,316.26			22,316.26											
Michigan	157,549.32	10,403.34		15,091.87	9,021.13	3,068.64			6,574.96	9,550.00	11,654.92		29,820.79	5,380.00	7,040.00
Minnesota	147,466.02	1,100.00	2,545.49	117,079.50	5,964.30	8,374.54				1,237.59	2,000.00	907.75	2,343.09	190.54	694.30
Mississippi	171,201.86	15,690.86		113,625.65	28,968.24	9,472.35									
Missouri	200,645.26	5,419.51	3,978.22	107,665.94	15,631.71	10,635.83	2,713.23	1,110.61	5,736.42	5,235.02	5,590.13		10,035.79	2,636.16	4,424.39
Montana	41,613.89	3,800.00	199.54	15,536.06	4,420.00	3,800.00			1,767.35	1,765.94	1,255.08		1,361.47	2,200.00	1,514.49
Nebraska	98,389.25	7,098.45	1,612.91	56,637.97	2,722.49	8,114.89				1,048.05	1,970.00			1,293.14	2,373.47
Nevada	6,862.72			1,940.00	1,904.67										
New Hampshire	18,033.64			12,050.00	5,733.64	250.00									
New Jersey	74,378.43			24,338.02	9,074.96	12,642.69				7,071.38	7,311.38			2,520.00	3,080.00
New Mexico	32,616.21	9,203.91	2,059.87	15,824.16	1,573.02										
New York	198,241.56	972.19		102,227.76	47,819.37	16,500.00			5,900.00	2,750.00			3,000.00	3,118.06	3,250.00
North Carolina	228,426.37	18,334.12	4,881.31	75,743.09	38,430.39	3,852.69			8,610.64	7,303.56	17,221.28		13,501.55	3,940.22	
North Dakota	61,683.39	3,723.30	1,536.96	21,150.40	2,354.79	4,154.99			3,219.34	2,456.67	2,960.00	3,000.00	2,279.99	2,253.00	1,250.01
Ohio	229,917.62	15,020.00		132,948.72	9,424.55	13,331.61			7,600.00	2,950.00	3,800.00		10,518.33	3,200.00	5,974.41
Oklahoma	164,389.77	18,580.12	4,465.00	80,226.55	17,090.29	9,558.36			3,750.00	5,700.00	4,875.00		3,000.00	2,800.00	
Oregon	43,324.53	3,660.00		15,612.99	1,500.00	4,160.00			2,200.00	1,800.00	2,550.00		575.00	1,252.81	
Pennsylvania	343,641.38	27,274.09	3,651.88	117,366.28	107,598.55	2,043.34	13,324.82			12,189.14	3,533.35				
Rhode Island	1,680.24	275.82	83.57	410.09	138.82	116.01			121.20	79.15			29.14		

South Carolina---	153, 451. 23	8, 726. 35	4, 436. 37	89, 133. 93	36, 639. 34	8, 941. 04	2, 732. 50	3, 710. 00	3, 400. 00	500. 26	2, 023. 60	1, 653. 05	1, 827. 74	3, 160. 19	---
South Dakota---	59, 037. 45	11, 962. 95	3, 199. 31	9, 086. 35	4, 138. 98	3, 555. 00	---	---	2, 163. 48	5, 975. 00	8, 820. 00	---	4, 796. 40	2, 640. 00	---
Tennessee---	190, 653. 31	11, 783. 98	1, 051. 03	79, 166. 51	34, 841. 01	---	---	---	10, 955. 00	2, 833. 34	2, 833. 33	---	3, 333. 33	1, 400. 00	---
Texas---	347, 874. 42	---	368. 07	207, 152. 06	103, 582. 34	---	---	---	5, 820. 00	---	---	---	1, 778. 89	75. 00	1, 400. 00
Utah---	25, 816. 87	4, 527. 80	---	13, 267. 03	3, 200. 16	---	---	---	499. 92	1, 172. 16	2, 358. 87	---	495. 29	---	1, 018. 11
Vermont---	26, 770. 93	3, 519. 69	---	8, 786. 86	4, 261. 13	4, 624. 06	---	---	---	8, 923. 81	11, 392. 93	---	8, 289. 23	3, 465. 02	---
Virginia---	180, 554. 95	40. 44	12, 555. 40	39, 110. 98	50, 975. 68	---	---	---	9, 019. 54	3, 513. 04	2, 786. 72	---	4, 664. 48	2, 607. 14	2, 708. 37
Washington---	67, 121. 21	4, 238. 17	2, 138. 73	16, 381. 00	6, 023. 93	3, 446. 71	---	---	2, 874. 53	---	440. 00	---	---	---	---
West Virginia---	120, 873. 37	1, 500. 00	---	70, 549. 95	24, 202. 13	24, 181. 29	---	---	---	---	---	---	---	---	---
Wisconsin---	153, 204. 06	4, 739. 66	1, 744. 14	89, 596. 28	644. 10	3, 730. 61	---	1, 853. 34	5, 482. 05	1, 618. 91	11, 597. 87	---	7, 414. 70	1, 730. 25	264. 13
Wyoming---	15, 133. 15	9. 46	---	13, 923. 69	1, 200. 00	---	---	---	---	---	---	---	---	---	---
Total, 1929---	5, 682, 180. 80	300, 878. 57	66, 538. 82	2, 896, 354. 18	866, 956. 17	233, 896. 16	21, 546. 70	13, 341. 86	122, 051. 67	131, 251. 46	144, 157. 74	9, 126. 79	150, 995. 94	74, 247. 84	47, 665. 12
1928---	5, 400, 000. 00	248, 360. 35	66, 577. 46	2, 710, 846. 14	820, 684. 88	228, 767. 19	38, 779. 42	13, 225. 01	171, 861. 95	128, 812. 75	122, 290. 63	13, 359. 11	175, 939. 93	72, 137. 57	31, 747. 16
1927---	5, 400, 000. 00	240, 064. 19	98, 681. 84	2, 876, 107. 68	728, 071. 31	207, 667. 79	36, 352. 87	12, 261. 55	150, 433. 55	127, 443. 57	113, 868. 01	9, 806. 86	152, 758. 64	70, 503. 52	32, 742. 74
1926---	5, 400, 000. 00	238, 648. 04	104, 493. 36	2, 861, 288. 71	759, 181. 86	222, 413. 89	46, 202. 49	15, 664. 10	145, 205. 90	129, 600. 34	118, 739. 28	6, 408. 24	162, 469. 95	69, 537. 29	25, 130. 61
1925---	5, 399, 999. 99	260, 230. 20	80, 633. 60	2, 871, 202. 68	764, 356. 32	180, 045. 94	114, 996. 88	15, 716. 27	150, 132. 86	109, 889. 36	110, 540. 95	13, 609. 97	132, 991. 43	60, 993. 43	25, 993. 85
1924---	5, 400, 000. 00	285, 911. 89	81, 005. 72	2, 962, 393. 16	750, 939. 18	194, 681. 32	165, 523. 64	13, 984. 83	176, 842. 99	103, 904. 31	133, 617. 88	13, 628. 91	117, 546. 29	---	---
1923---	5, 400, 000. 00	332, 631. 65	74, 414. 38	2, 940, 071. 60	831, 627. 67	193, 467. 20	104, 525. 11	5, 506. 33	150, 062. 17	100, 913. 09	115, 412. 01	10, 546. 32	115, 216. 02	---	---
1922---	5, 100, 000. 00	299, 388. 81	78, 678. 18	2, 669, 702. 27	775, 682. 83	228, 517. 62	200, 301. 69	16, 517. 56	117, 689. 62	89, 407. 18	88, 359. 26	10, 248. 45	128, 143. 57	---	---
1921---	4, 600, 000. 00	299, 526. 68	76, 823. 58	2, 348, 738. 60	761, 014. 77	215, 447. 91	94, 802. 54	22, 731. 78	104, 050. 07	77, 498. 14	74, 905. 25	15, 728. 27	100, 675. 72	---	---
1920---	4, 100, 000. 00	247, 554. 18	58, 956. 38	2, 204, 209. 25	589, 724. 44	178, 287. 12	117, 032. 75	47, 019. 29	84, 244. 58	61, 520. 81	50, 416. 25	14, 135. 15	70, 309. 47	---	---
1919---	2, 100, 000. 00	252, 329. 45	55, 540. 79	941, 902. 93	293, 869. 64	112, 706. 28	---	28, 667. 68	55, 747. 75	34, 779. 81	48, 483. 73	11, 498. 94	42, 585. 94	---	---
1918---	1, 600, 000. 00	178, 212. 44	40, 130. 89	766, 416. 54	197, 262. 21	80, 315. 51	---	35, 850. 11	44, 274. 89	22, 973. 75	45, 155. 37	8, 054. 15	44, 613. 67	---	---
1917---	1, 100, 000. 00	97, 302. 53	34, 819. 50	541, 495. 05	126, 235. 78	50, 209. 68	---	36, 501. 94	27, 199. 22	12, 722. 78	24, 306. 88	5, 230. 27	26, 433. 67	---	---
1916---	600, 000. 00	90, 055. 50	15, 198. 34	283, 077. 42	68, 408. 44	28, 473. 54	---	25, 754. 65	7, 305. 47	7, 102. 61	9, 905. 43	2, 406. 88	9, 439. 85	---	---

¹ Prior to 1920 included home-economics specialists.
² Prior to 1920 included under home demonstration work.
³ Prior to 1925 included foods and nutrition, home management, and clothing.
⁴ Prior to 1925 included under home economics.

TABLE 21.—Expenditures from the United States appropriation of May 8, 1914 (State Smith-Lever), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects, and totals for 1916-1928—Continued

State	Cloth- ing ⁴	Horticul- ture	Botany and plant pathology	Ento- mology, apicul- ture, ornithol- ogy	Rodent pests	Forestry	Agricul- tural en- gineering	Farm manage- ment	Rural organiza- tion	Market- ing	Exhibits and fairs	Publicity	Miscella- neous specialists	Unex- pended balance
Alabama	\$1,322.32	\$4,933.66		\$1,371.67			\$1,273.20			\$10,781.42	\$85.89	\$488.37		
Arizona				41.07										
Arkansas	1,380.00	1,766.73				\$240.00				1,735.00		3,320.74		
Colorado	1,896.63	132.60		1,910.21				\$1,758.15				670.59		
Connecticut	573.87	2,474.17				15.00	2,153.52	4,040.40		5,149.39				
Florida														\$33.70
Georgia	1,138.02	15,487.60				2,800.64	9,860.03			6,746.52				
Hawaii														5,365.78
Idaho	1,431.21	1,700.00		200.00										
Kansas	3,069.91	6,327.27	\$3,745.49	4,392.12	\$1,414.53		2,380.15	1,747.70		4,114.22		48.33		
Kentucky	5,400.00	6,899.99						4,623.33						
Louisiana	3,245.40	8,143.92		5,671.82					\$3,044.33	1,344.06		6,164.84		
Maine	3,343.49					3,340.46		3,734.41						
Maryland		3,296.92		118.83					1,000.00	108.34		1,424.42		
Michigan	5,960.00	13,609.96		1,200.00			10,153.80	974.97		11,190.00		6,849.94		
Minnesota			287.50			330.61				460.81		3,900.00		
Mississippi							3,444.76							
Missouri	5,493.23	1,037.38					3,965.66	2,427.70	1,416.84	2,634.12		2,837.37		
Montana	2,200.00							3,300.00				4,643.80		
Nebraska	1,637.91	563.18					2,752.44	1,589.97		428.75		5,413.84		
New Jersey		8,340.00												
New Mexico												3,955.25		
New York		3,400.00	3,750.00				2,250.00		2,400.00					904.18
North Carolina	3,869.72	9,038.90	4,003.93	8,943.36		983.95	4,280.83					5,486.78		
North Dakota	3,939.99						1,621.66	1,239.52				4,542.77		
Ohio		10,500.00					6,400.00	4,650.00		3,600.00				
Oklahoma	2,375.00	3,933.32		2,225.00			2,811.13	3,000.00						
Oregon		3,206.93						366.67		5,014.31		1,425.82		
Pennsylvania		2,895.03	10,884.07	18,986.37		7,078.42		1,737.22	4,692.95	9,385.90		1,000.00		
Rhode Island		116.00												
South Carolina	864.63	842.59		421.29			913.87			6,200.00		6,560.00		
South Dakota	2,815.00	3,730.00					996.09	762.80		1,846.14		3,441.24		
Tennessee	1,400.00	2,960.00		2,860.00				5,550.00		4,105.00		2,930.00		
Texas							2,860.00		2,224.09			6,164.90		
Utah	900.00													
Vermont		529.51						5.25						
Virginia	540.00	11,473.49	4,201.39			823.77	8,937.91	3,471.52	3,862.31	3,417.53				

TABLE 22.—*Sources of offset to Federal Smith-Lever funds for the fiscal year ended June 30, 1929, by States, and totals for 1916-1928*

State	Total appropriation	State	County	Farmers' organizations, etc.	Unexpended balance
Alabama.....	\$203,041.91	\$136,871.61	\$66,170.30		
Arizona.....	23,920.44	23,920.44			
Arkansas.....	161,397.98	73,380.00	88,017.98		
California.....	120,921.71	120,921.71			
Colorado.....	53,703.73	53,703.73			
Connecticut.....	49,057.58	49,057.58			
Delaware.....	11,288.65	10,741.56	547.09		
Florida.....	67,646.71	48,872.25	18,740.76		\$33.70
Georgia.....	239,382.01	172,944.65	66,437.36		
Hawaii.....	17,905.20	1,784.22			16,120.98
Idaho.....	34,541.76	34,541.76			
Illinois.....	229,624.34	111,076.67		\$118,547.67	
Indiana.....	159,833.14	84,052.69	75,780.45		
Iowa.....	168,775.89		168,775.89		
Kansas.....	127,122.84	91,841.56	35,281.28		
Kentucky.....	196,883.86	142,241.30	51,558.93		3,083.63
Louisiana.....	129,226.59	92,272.69	36,953.90		
Maine.....	51,724.50	49,217.76	2,506.74		
Maryland.....	64,068.49	64,068.49			
Massachusetts.....	22,316.26		22,316.26		
Michigan.....	157,549.32	142,457.45	15,091.87		
Minnesota.....	147,466.02	105,856.57	41,609.45		
Mississippi.....	171,201.86	71,064.68	100,137.18		
Missouri.....	200,645.26	98,133.30	102,511.96		
Montana.....	41,613.89	26,592.25	15,021.64		
Nebraska.....	98,389.25	48,994.95	49,394.30		
Nevada.....	6,862.72	6,862.72			
New Hampshire.....	18,033.64	18,033.64			
New Jersey.....	74,378.43	74,378.43			
New Mexico.....	32,616.21	23,564.00	9,052.21		
New York.....	198,241.56	116,086.28	81,251.10		904.18
North Carolina.....	228,426.37	171,778.43	56,647.94		
North Dakota.....	61,683.39	45,445.72	16,237.67		
Ohio.....	229,917.62	166,882.41	63,035.21		
Oklahoma.....	164,389.77	118,765.52	45,624.25		
Oregon.....	43,324.53	43,324.53			
Pennsylvania.....	343,641.38	283,333.24	60,308.14		
Rhode Island.....	1,680.24	1,369.80			310.44
South Carolina.....	153,451.23	97,196.33	56,254.90		
South Dakota.....	59,037.45	56,176.30	2,861.15		
Tennessee.....	190,653.31	85,662.16	104,991.15		
Texas.....	347,874.42	251,326.40	96,548.02		
Utah.....	25,816.87	25,816.87			
Vermont.....	26,770.93	26,770.93			
Virginia.....	180,554.95	168,162.44	12,392.51		
Washington.....	67,121.21	63,965.11	450.51		2,705.59
West Virginia.....	120,873.37	2,765.00	118,108.37		
Wisconsin.....	153,204.06	128,915.59	24,288.47		
Wyoming.....	15,133.15	15,133.15			
Total, 1929.....	5,692,936.00	3,846,324.87	1,704,904.94	118,547.67	23,158.52
1928.....	5,400,000.00	3,739,918.23	1,541,568.37	117,308.41	1,204.99
1927.....	5,400,000.00	3,718,271.77	1,572,968.24	107,196.73	1,563.26
1926.....	5,400,000.00	3,620,775.64	1,670,811.48	107,595.98	816.90
1925.....	5,399,999.99	3,657,975.00	1,634,787.09	106,321.80	916.10
1924.....	5,400,000.00	3,542,542.33	1,729,371.54	107,691.14	20,394.99
1923.....	5,400,000.00	3,463,045.41	1,769,973.22	107,798.26	59,183.11
1922.....	5,100,000.00	3,218,002.63	1,712,675.09	99,671.73	69,650.55
1921.....	4,600,000.00	2,966,461.61	1,518,778.45	8,808.44	105,951.50
1920.....	4,100,000.00	2,630,754.55	1,095,923.84	257,665.97	115,655.64
1919.....	2,100,000.00	1,586,066.42	316,367.59	156,394.03	41,171.96
1918.....	1,600,000.00	1,313,330.47	215,077.20	59,658.62	11,933.71
1917.....	1,100,000.00	952,114.31	94,556.74	48,383.33	4,945.62
1916.....	600,000.00	497,484.18	69,226.79	31,212.76	2,076.27

TABLE 23.—Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by sources of funds, and totals for 1915-1928

State	Grand total	Federal total	Total within the State	U. S. Department of Agriculture		Federal Clarke-McNary	Federal Capper-Ketcham	Federal Smith-Lever	State and college	County	Farmers' organizations, etc.
				Farmers' cooperative demonstrations	Other						
Alabama.....	\$723, 580. 19	\$266, 765. 58	\$456, 814. 61	\$31, 743. 67	-----	\$1, 980. 00	\$20, 000. 00	\$213, 041. 91	\$271, 074. 13	\$167, 360. 04	\$18, 380. 44
Arizona.....	140, 123. 19	65, 802. 31	74, 320. 88	11, 751. 98	\$129. 89	-----	20, 000. 00	33, 920. 44	50, 312. 14	23, 966. 84	41. 90
Arkansas.....	548, 884. 09	314, 012. 92	234, 871. 17	29, 732. 20	91, 262. 74	1, 620. 00	20, 000. 00	171, 397. 98	75, 000. 00	156, 031. 17	3, 840. 00
California.....	748, 856. 31	166, 664. 72	582, 191. 59	23, 472. 33	-----	1, 980. 00	10, 290. 68	130, 921. 71	396, 623. 91	185, 567. 68	-----
Colorado.....	250, 693. 42	110, 179. 46	140, 513. 96	22, 056. 92	3, 793. 81	625. 00	20, 000. 00	63, 703. 73	83, 844. 80	56, 669. 16	-----
Connecticut.....	269, 677. 77	91, 502. 41	178, 175. 36	11, 522. 51	-----	999. 96	19, 922. 36	59, 057. 58	115, 859. 08	38, 500. 00	23, 816. 28
Delaware.....	55, 055. 21	43, 766. 56	11, 288. 65	2, 570. 35	-----	-----	19, 907. 56	21, 288. 65	10, 741. 56	547. 09	-----
Florida.....	361, 495. 89	117, 711. 01	243, 784. 88	23, 029. 94	-----	-----	17, 068. 06	77, 613. 01	80, 935. 16	162, 849. 72	-----
Georgia.....	802, 383. 64	306, 795. 89	495, 587. 75	35, 611. 39	-----	1, 980. 00	19, 822. 49	249, 382. 01	284, 705. 13	210, 882. 62	-----
Hawaii.....	23, 745. 10	21, 835. 88	1, 909. 22	19. 21	-----	125. 00	9, 907. 45	11, 784. 22	1, 909. 22	-----	-----
Idaho.....	231, 985. 21	79, 099. 31	152, 885. 90	20, 038. 06	2, 700. 00	1, 080. 00	10, 739. 49	44, 541. 76	89, 585. 13	62, 524. 77	776. 00
Illinois.....	980, 524. 69	261, 930. 58	718, 594. 11	11, 386. 67	1, 511. 08	1, 980. 00	7, 428. 49	239, 624. 34	126, 556. 67	20, 987. 50	571, 049. 94
Indiana.....	594, 332. 07	200, 180. 40	394, 151. 67	10, 347. 26	-----	-----	20, 000. 00	169, 833. 14	139, 476. 53	195, 030. 63	59, 644. 51
Iowa.....	1, 039, 563. 06	213, 785. 81	825, 777. 25	13, 029. 92	-----	1, 980. 00	20, 000. 00	178, 775. 89	251, 401. 36	304, 875. 00	269, 500. 89
Kansas.....	643, 198. 89	168, 299. 58	474, 899. 31	11, 176. 74	-----	-----	20, 000. 00	137, 122. 84	144, 086. 31	246, 623. 35	84, 189. 65
Kentucky.....	545, 257. 84	279, 600. 02	265, 657. 82	30, 808. 90	-----	-----	20, 000. 00	203, 800. 23	142, 241. 30	118, 514. 69	4, 901. 83
Louisiana.....	488, 014. 64	259, 200. 49	228, 814. 15	27, 442. 34	24, 990. 89	-----	11, 441. 99	139, 226. 59	95, 887. 35	132, 926. 80	-----
Maine.....	184, 965. 01	100, 065. 43	84, 899. 53	18, 340. 98	79, 582. 57	1, 507. 00	20, 000. 00	61, 724. 50	49, 705. 28	29, 805. 66	5, 388. 59
Maryland.....	357, 272. 24	113, 430. 53	243, 841. 71	17, 426. 04	-----	1, 936. 00	20, 000. 00	74, 068. 49	165, 755. 08	64, 014. 00	14, 072. 63
Massachusetts.....	461, 471. 90	78, 124. 69	383, 347. 21	23, 828. 43	-----	1, 980. 00	20, 000. 00	32, 316. 26	100, 065. 86	283, 281. 35	-----
Michigan.....	717, 829. 01	198, 938. 98	518, 890. 03	9, 409. 66	-----	1, 980. 00	20, 000. 00	167, 549. 32	299, 823. 03	210, 375. 00	8, 692. 00
Minnesota.....	497, 894. 88	188, 467. 52	309, 427. 36	12, 976. 29	-----	1, 980. 49	16, 044. 72	157, 466. 02	137, 307. 69	147, 598. 93	24, 520. 74
Mississippi.....	604, 838. 68	295, 555. 69	309, 282. 99	35, 838. 64	-----	1, 947. 00	20, 000. 00	181, 201. 86	78, 023. 00	231, 259. 99	-----
Missouri.....	512, 938. 70	260, 878. 00	252, 060. 70	13, 479. 41	56, 568. 19	-----	20, 000. 00	210, 645. 26	101, 672. 85	150, 387. 85	-----
Montana.....	316, 549. 00	94, 599. 70	221, 949. 30	25, 250. 35	16, 753. 33	-----	13, 920. 47	51, 613. 89	84, 458. 73	137, 490. 57	-----
Nebraska.....	348, 902. 57	148, 188. 97	200, 713. 60	13, 694. 14	3, 814. 99	1, 980. 00	20, 000. 00	108, 389. 25	71, 254. 46	113, 716. 69	15, 742. 45
Nevada.....	116, 721. 85	51, 293. 41	65, 428. 44	11, 230. 77	4, 125. 58	-----	20, 000. 00	16, 862. 72	33, 377. 73	32, 050. 71	-----
New Hampshire.....	200, 385. 74	67, 716. 84	132, 668. 90	17, 703. 20	-----	1, 980. 00	20, 000. 00	23, 033. 64	72, 500. 00	60, 168. 90	-----
New Jersey.....	382, 652. 07	115, 245. 13	267, 406. 94	13, 470. 53	-----	1, 947. 00	15, 449. 17	84, 378. 43	104, 300. 00	159, 773. 63	3, 333. 31
New Mexico.....	170, 482. 19	75, 876. 37	94, 605. 82	20, 468. 29	1, 143. 34	-----	11, 648. 53	42, 616. 21	23, 564. 00	70, 595. 22	446. 60
New York.....	1, 381, 200. 36	239, 208. 27	1, 141, 992. 07	9, 990. 47	-----	1, 980. 00	19, 900. 44	207, 337. 38	444, 575. 09	680, 658. 11	16, 758. 87
North Carolina.....	688, 210. 21	292, 581. 46	395, 628. 75	32, 175. 09	-----	1, 980. 00	20, 000. 00	238, 426. 37	181, 111. 71	214, 517. 04	-----
North Dakota.....	266, 037. 79	117, 172. 73	148, 865. 06	24, 051. 84	-----	1, 980. 00	20, 000. 00	71, 683. 39	56, 945. 72	89, 465. 32	2, 454. 02
Ohio.....	806, 913. 15	272, 011. 89	534, 901. 26	10, 344. 31	-----	1, 437. 50	20, 000. 00	239, 917. 62	325, 875. 81	209, 025. 45	-----
Oklahoma.....	533, 375. 75	222, 731. 44	310, 644. 31	28, 342. 27	-----	1, 749. 96	19, 999. 40	174, 389. 77	118, 765. 52	191, 878. 79	-----
Oregon.....	331, 762. 10	99, 271. 71	232, 490. 39	22, 552. 30	4, 800. 00	-----	18, 594. 88	53, 324. 53	133, 165. 29	92, 678. 17	6, 646. 93
Pennsylvania.....	847, 051. 35	375, 342. 32	471, 709. 03	200. 94	-----	1, 500. 00	20, 000. 00	353, 641. 38	322, 859. 03	148, 850. 00	-----

TABLE 23.—Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by sources of funds, and totals for 1915-1928—Continued

State	Grand total	Federal total	Total within the State	U. S. Department of Agriculture		Federal Clarke-McNary	Federal Capper-Ketcham	Federal Smith-Lever	State and college	County	Farmers' organizations, etc.
				Farmers' cooperative demonstrations	Other						
Rhode Island.....	\$54,035.65	\$29,962.35	\$24,073.30	\$7,260.94	-----	-----	\$11,331.61	\$11,369.80	\$4,769.80	\$12,478.00	\$6,825.50
South Carolina.....	453,458.27	213,697.94	239,760.33	30,246.71	-----	-----	20,000.00	163,451.23	110,120.98	129,639.35	-----
South Dakota.....	303,470.35	113,022.28	190,448.07	21,584.83	\$2,400.00	-----	20,000.00	69,037.45	95,313.09	95,134.98	-----
Tennessee.....	505,129.32	273,479.47	231,649.85	33,067.95	17,778.21	\$1,980.00	20,000.00	200,653.31	94,414.52	137,235.33	-----
Texas.....	1,071,237.76	433,441.26	637,796.50	53,586.84	-----	1,980.00	20,000.00	357,874.42	253,306.40	357,237.18	27,252.92
Utah.....	150,737.56	82,703.02	68,034.54	16,748.02	10,138.13	-----	20,000.00	35,816.87	36,911.59	29,627.00	1,495.95
Vermont.....	188,243.13	105,602.86	82,640.27	17,619.67	29,578.76	1,633.50	20,000.00	36,770.93	33,543.85	38,531.94	10,564.48
Virginia.....	558,895.02	242,431.24	316,463.78	30,276.33	-----	1,599.96	20,000.00	190,554.95	196,725.13	110,090.29	9,648.36
Washington.....	286,547.48	116,475.98	170,071.50	23,997.89	-----	-----	18,062.47	74,415.62	65,612.48	99,420.32	5,038.70
West Virginia.....	430,175.56	169,641.15	260,534.41	16,787.78	-----	1,930.00	20,000.00	130,873.37	142,426.04	118,108.37	-----
Wisconsin.....	520,794.12	193,057.40	327,736.72	7,873.34	-----	1,980.00	20,000.00	163,204.06	172,142.25	155,594.47	-----
Wyoming.....	172,476.78	64,741.27	107,735.51	17,370.73	2,400.00	300.00	19,537.39	25,133.15	63,010.33	44,725.18	-----
Total, 1929.....	22,870,026.76	8,412,090.30	14,457,936.46	952,935.37	356,671.43	51,688.37	891,017.65	6,159,777.48	6,533,642.12	6,729,270.85	1,195,023.49
1928.....	20,677,423.66	7,040,447.03	13,636,976.63	979,522.15	131,465.36	50,664.51	-----	5,878,795.01	6,210,848.55	6,232,223.56	1,193,904.52
1927.....	20,147,319.39	6,991,634.21	13,155,655.18	986,833.90	83,081.91	43,251.66	-----	5,878,436.74	5,855,177.85	6,104,682.36	1,195,794.97
1926.....	19,485,492.81	6,907,747.89	12,577,744.92	967,166.73	129,377.72	32,021.34	-----	5,879,183.10	5,766,165.92	5,667,425.56	1,144,153.44
1925.....	19,332,371.40	7,070,330.90	12,262,040.50	962,390.34	228,856.67	-----	-----	5,879,083.89	5,636,721.89	5,528,601.25	1,096,717.36
1924.....	19,082,025.04	7,085,826.81	11,996,198.23	991,900.82	234,320.93	-----	-----	5,859,605.01	5,239,420.54	5,612,556.56	1,144,221.13
1923.....	18,484,845.00	7,101,078.42	11,383,766.58	1,004,729.29	275,532.24	-----	-----	5,820,816.89	5,175,811.94	5,189,974.03	1,017,980.61
1922.....	17,181,751.64	6,727,153.86	10,454,597.78	1,007,263.48	209,540.93	-----	-----	5,510,349.45	4,715,382.34	4,685,415.80	1,053,799.64
1921.....	16,792,248.32	6,434,178.53	10,358,069.79	1,025,083.33	435,046.70	-----	-----	4,974,048.50	4,516,358.91	4,812,344.83	1,029,366.05
1920.....	14,658,079.92	5,891,456.71	8,766,623.21	1,021,091.39	406,020.96	-----	-----	4,464,344.36	3,875,220.27	3,961,663.71	929,739.23
1919.....	14,661,560.50	9,039,041.38	5,622,519.12	2,564,839.70	935,373.64	-----	-----	2,538,828.04	2,487,894.91	2,607,576.89	527,047.32
1918.....	11,302,764.75	6,475,755.54	4,827,009.21	3,900,403.30	507,282.95	-----	-----	2,068,066.29	2,194,421.72	2,078,709.49	553,878.00
1917.....	6,149,619.63	2,719,281.40	3,430,338.23	958,383.87	185,893.15	-----	-----	1,575,054.38	1,784,228.47	1,352,852.88	293,256.88
1916.....	4,864,180.94	2,143,485.66	2,720,695.28	900,339.92	165,172.01	-----	-----	1,077,923.73	1,370,218.03	1,042,478.35	307,998.85
1915.....	3,597,235.85	1,485,885.13	2,111,350.72	905,782.00	105,163.40	-----	-----	474,934.73	1,044,270.38	780,331.79	286,748.55

¹ Prior to 1926, included funds from various other bureaus

² Includes \$4,598,243.13 emergency funds.

³ Includes \$2,949,072.48 emergency funds.

TABLE 24.—Total expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by items of expense, and totals for 1915-1928

State	Total appropriation	Personal services, salaries, and labor	Printing, binding, and cuts for publications	Supplies and materials	Communication service	Transportation of things	Heat, light, water, and power	Equipment	Travel expenses	Miscellaneous
Alabama-----	\$723,580.19	\$534,245.12	\$6,150.37	\$19,379.89	\$6,252.65	\$1,940.41	\$1,351.55	\$76,243.54	\$52,778.11	\$25,238.55
Arizona-----	140,123.19	103,639.23	1,859.67	3,274.24	1,268.31	226.20	103.67	849.69	27,245.08	1,657.10
Arkansas-----	548,884.09	466,485.68	6,953.40	2,656.68	2,811.44	531.55	-----	2,530.41	62,775.83	4,139.10
California-----	748,856.31	567,035.94	-----	30,705.58	9,264.88	1,526.32	1,009.27	7,703.92	121,233.42	10,376.98
Colorado-----	250,693.42	160,182.30	4,335.07	14,366.02	4,039.14	822.85	42.95	3,567.21	57,610.04	5,727.84
Connecticut-----	269,677.77	177,246.38	6,805.56	8,625.56	6,081.10	624.31	2,439.45	3,813.52	49,922.20	14,119.69
Delaware-----	55,055.21	37,552.11	837.40	3,011.89	1,023.64	77.57	-----	3,095.32	9,370.29	86.99
Florida-----	361,495.89	318,564.22	4,726.94	5,862.14	4,150.78	151.80	51.08	2,826.35	28,030.13	420.57
Georgia-----	802,383.64	625,357.54	5,925.37	8,425.89	4,150.78	269.89	3,820.96	3,995.75	50,451.19	99,986.27
Hawaii-----	23,745.10	13,899.45	779.82	732.37	140.21	93.49	-----	4,079.28	3,941.32	79.16
Idaho-----	231,985.21	155,638.20	2,238.02	9,600.62	4,358.03	974.73	52.25	1,140.78	55,448.10	2,534.48
Illinois-----	980,524.69	636,266.40	4,707.38	57,053.82	34,592.85	2,052.16	7,703.14	40,616.86	88,856.46	108,675.62
Indiana-----	594,332.07	464,855.21	4,676.95	19,508.44	7,015.12	857.11	621.15	3,104.63	80,768.01	12,925.45
Iowa-----	1,039,563.06	688,206.11	30,452.94	44,052.68	37,412.02	7,377.07	4,000.00	7,416.82	157,835.42	62,810.00
Kansas-----	643,198.89	441,380.46	1,655.05	28,617.73	17,345.97	1,290.57	760.13	38,125.50	70,938.30	43,085.18
Kentucky-----	545,257.84	403,839.09	6,549.71	5,895.11	1,855.56	809.37	3,600.00	2,444.62	113,888.40	375.98
Louisiana-----	488,014.64	431,175.28	8,060.51	7,676.16	1,141.43	374.07	152.07	10,233.65	28,980.01	221.46
Maine-----	184,965.01	127,309.22	1,228.43	8,177.12	3,790.43	432.14	2,016.11	4,145.24	37,632.95	233.37
Maryland-----	357,272.24	257,631.69	3,107.65	21,072.10	2,917.93	3,339.26	2,215.00	2,386.67	63,856.90	745.04
Massachusetts-----	461,471.90	273,631.09	4,635.87	6,829.74	3,642.93	333.89	6.50	2,817.60	167,159.79	2,414.49
Michigan-----	717,829.01	465,833.37	9,832.32	13,126.98	4,781.04	776.97	-----	8,921.94	212,776.01	1,730.38
Minnesota-----	497,894.88	368,371.79	6,786.53	14,857.28	8,368.95	1,095.12	288.66	1,675.68	92,984.62	3,466.25
Mississippi-----	604,838.68	558,653.87	1,902.06	5,413.17	2,117.56	487.79	687.41	1,790.93	32,806.89	979.00
Missouri-----	512,938.70	375,239.74	5,796.75	21,291.31	7,965.73	713.98	393.94	3,621.80	93,744.95	4,170.50
Montana-----	316,549.00	190,369.87	2,585.64	5,710.86	1,098.22	509.84	1,080.12	812.15	114,324.90	57.40
Nebraska-----	348,902.57	260,291.07	2,029.00	13,919.28	8,890.60	572.36	314.20	6,332.19	50,746.44	5,807.43
Nevada-----	116,721.85	69,209.50	560.87	5,395.65	2,221.24	375.63	392.75	13,551.46	20,576.57	4,438.18
New Hampshire-----	200,385.74	135,150.06	3,545.53	8,483.39	2,960.06	739.69	700.00	3,233.52	42,482.80	3,090.69
New Jersey-----	382,652.07	282,234.44	4,377.99	17,173.75	4,736.65	465.87	412.54	12,134.10	56,525.41	4,591.32
New Mexico-----	170,482.19	116,405.73	2,063.67	3,823.84	2,366.29	656.01	500.00	1,771.11	42,445.50	450.04
New York-----	1,381,200.36	822,814.73	99,915.73	53,913.27	32,944.77	1,694.74	40,900.08	55,140.58	170,417.70	103,458.76
North Carolina-----	688,210.21	585,392.39	4,881.31	6,088.28	2,454.20	568.01	1,508.16	3,942.12	80,144.27	3,231.47
North Dakota-----	266,037.79	184,348.84	3,232.20	6,030.89	3,492.31	300.18	5,000.00	1,685.50	61,625.92	420.30
Ohio-----	806,913.15	624,665.66	16,654.20	18,160.25	7,493.96	899.22	-----	2,677.15	133,581.90	2,782.46
Oklahoma-----	533,375.75	479,690.58	5,067.79	7,419.63	2,060.37	110.34	-----	3,173.10	35,853.94	-----
Oregon-----	331,762.10	241,597.51	2,234.03	12,450.17	8,604.65	815.12	297.78	3,291.85	58,804.52	3,666.47
Pennsylvania-----	847,051.35	593,785.53	5,108.99	17,909.74	10,921.15	464.66	1,554.14	3,873.92	191,373.99	22,059.23
Rhode Island-----	54,035.65	34,317.92	484.61	1,945.84	132.54	59.27	-----	629.57	9,097.35	7,368.55
South Carolina-----	453,458.27	390,318.70	4,731.48	7,198.16	4,779.31	435.10	611.00	1,770.58	38,347.36	5,266.58
South Dakota-----	303,470.35	212,370.06	2,735.16	15,839.62	5,236.54	543.58	192.74	1,650.53	62,020.75	2,881.37
Tennessee-----	505,129.32	441,726.59	7,118.04	9,514.37	2,606.28	639.91	1,110.05	2,103.05	38,174.52	2,136.51

TABLE 24.—Total expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by items of expense, and totals for 1915-1928—Continued

State	Total appropriation	Personal services, salaries, and labor	Printing, binding, and cuts for publications	Supplies and materials	Communication service	Transportation of things	Heat, light, water, and power	Equipment	Travel expenses	Miscellaneous
Texas-----	\$1,071,237.76	\$927,774.75	\$5,636.26	\$7,619.65	\$2,960.19	\$490.62	-----	\$194.62	\$126,474.78	\$86.89
Utah-----	150,737.56	104,656.10	856.28	2,527.67	512.41	164.73	-----	1,691.37	38,914.53	1,414.47
Vermont-----	188,243.13	125,152.36	1,934.15	10,947.28	3,138.89	650.02	\$847.51	4,109.06	31,324.58	10,139.28
Virginia-----	558,895.02	458,412.37	11,022.59	9,431.40	2,599.93	606.98	91.68	1,879.09	74,596.13	254.85
Washington-----	286,547.48	211,334.93	5,334.97	18,386.50	4,161.37	978.77	38.03	2,460.00	43,368.86	484.05
West Virginia-----	430,175.56	361,237.18	5,696.35	10,559.79	4,561.26	564.89	1,327.83	16,395.32	29,304.88	528.06
Wisconsin-----	520,794.12	404,060.52	12,341.66	5,702.26	2,611.44	241.88	-----	1,732.00	94,038.39	65.97
Wyoming-----	172,476.78	119,444.24	2,030.36	3,669.87	669.17	217.49	5.00	698.88	45,740.27	1.50
Total, 1929-----	22,870,026.76	17,035,051.12	342,182.63	640,033.93	297,314.16	40,943.53	88,198.90	384,080.53	3,451,340.68	590,881.28
1928-----	20,677,423.66	15,646,449.16	296,136.16	537,921.00	269,407.27	38,879.89	90,173.92	265,727.18	3,017,628.45	515,100.63
1927-----	20,147,319.39	15,106,156.34	308,999.13	547,306.70	278,925.49	34,512.35	86,308.32	235,941.92	3,045,401.81	503,767.33
1926-----	19,485,492.81	14,645,209.97	332,887.97	523,105.44	270,258.81	32,076.21	77,008.93	240,933.31	2,899,159.58	464,852.59
1925-----	19,332,371.40	14,376,987.22	317,825.82	515,783.58	255,634.14	33,419.12	85,051.59	279,476.73	3,000,956.41	467,236.79
1924-----	19,082,025.04	13,960,024.41	344,036.52	771,311.06	233,704.70	27,215.82	63,155.12	176,912.37	3,147,711.34	357,953.70
1923-----	18,484,845.00	13,669,718.39	336,906.94	477,957.00	194,642.98	125,567.34	54,900.21	148,038.03	3,031,252.99	545,861.12
1922-----	17,181,751.64	12,740,999.28	395,859.62	410,592.62	186,562.01	-----	47,197.29	129,259.56	2,765,227.90	506,053.36
1921-----	16,792,248.32	12,416,878.29	382,034.06	516,051.82	195,275.08	-----	48,735.14	140,983.36	2,873,523.01	218,767.56
1920-----	14,658,079.92	10,481,790.44	308,620.24	433,337.62	137,230.47	-----	36,471.25	134,720.51	2,807,798.73	318,101.66
1919-----	14,661,560.50	10,649,803.53	263,371.74	493,138.35	133,351.26	-----	19,574.36	185,407.12	2,735,151.37	181,762.77
1918-----	11,302,764.75	8,335,805.69	190,267.35	417,264.23	127,128.31	-----	18,246.60	216,040.27	1,830,764.70	167,247.60
1917-----	6,149,619.63	4,490,900.05	144,777.26	230,752.18	68,330.02	-----	6,214.88	87,223.27	1,023,405.63	98,016.34
1916-----	4,864,180.94	3,514,061.85	98,850.56	176,793.16	48,709.30	-----	4,842.21	95,182.98	849,259.37	76,481.51
1915-----	3,597,235.85	2,686,923.95	72,090.72	105,526.62	37,437.90	-----	9,614.79	63,084.01	603,432.74	19,125.12

1 Prior to 1923, transportation of things was included in communication service.

TABLE 25.—Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928

State	Total	Adminis- tration	Printing and dis- tribution of publi- cations	County- agent work	Home dem- onstration work	Boys' and girls' club work	Home- econom- ics spe- cialists
Alabama.....	\$723,580.19	\$22,764.78	\$6,874.39	\$296,712.91	\$168,549.78	\$11,137.62	-----
Arizona.....	140,123.19	12,567.86	1,859.67	72,706.71	31,820.33	1,118.81	-----
Arkansas.....	548,884.09	17,685.62	6,953.40	275,557.98	184,813.87	5,803.63	-----
California.....	748,856.31	12,947.44	-----	449,623.58	159,668.53	27,570.38	-----
Colorado.....	250,693.42	11,216.83	4,335.07	125,583.55	22,602.25	16,663.03	-----
Connecticut.....	269,677.77	19,126.56	5,723.37	60,855.29	38,903.69	54,918.20	\$3,473.38
Delaware.....	55,055.21	10,903.62	903.67	16,471.21	12,222.74	12,299.74	-----
Florida.....	361,495.89	7,969.67	4,726.94	183,084.52	125,902.37	6,487.41	-----
Georgia.....	802,383.64	26,768.44	5,925.37	320,861.94	194,239.76	17,805.52	-----
Hawaii.....	23,745.10	4,304.83	852.13	9,833.46	8,504.68	-----	-----
Idaho.....	231,985.21	11,825.45	2,561.52	111,200.12	26,316.05	5,935.78	-----
Illinois.....	980,524.69	25,412.62	4,778.77	745,235.95	101,138.14	18,735.29	3,235.59
Indiana.....	594,332.07	26,410.12	4,676.95	345,905.50	19,689.39	61,226.76	-----
Iowa.....	1,039,563.06	61,443.91	11,685.62	643,270.07	45,349.99	38,548.35	-----
Kansas.....	643,198.89	22,743.46	4,247.89	371,327.74	82,019.11	19,485.54	3,850.86
Kentucky.....	545,257.84	20,133.08	9,131.81	299,055.79	79,035.35	32,382.30	-----
Louisiana.....	488,014.64	33,714.66	8,060.51	248,895.49	130,192.57	11,584.52	-----
Maine.....	184,965.01	11,445.86	1,228.43	68,621.81	49,866.55	19,530.35	-----
Maryland.....	357,272.24	20,817.60	3,107.65	130,298.49	99,094.98	8,140.15	-----
Massachusetts.....	461,471.90	21,335.19	4,635.87	115,912.35	105,153.72	138,949.58	-----
Michigan.....	717,829.01	13,386.09	7,891.43	321,517.78	46,306.70	95,981.70	-----
Minnesota.....	497,894.88	22,095.45	10,593.97	300,648.13	31,104.48	51,103.17	-----
Mississippi.....	604,838.68	27,150.78	1,902.06	297,821.95	195,021.62	19,675.36	-----
Missouri.....	512,938.70	14,511.23	7,703.55	291,957.54	55,214.56	21,855.88	4,624.95
Montana.....	316,549.00	20,169.84	2,585.64	170,864.76	47,363.17	9,634.73	-----
Nebraska.....	348,902.57	15,548.35	3,481.29	197,485.96	16,621.82	23,330.79	-----
Nevada.....	116,721.85	11,608.11	560.87	60,324.91	36,796.49	-----	-----
New Hampshire.....	200,385.74	14,651.09	3,173.01	53,718.46	38,006.62	56,342.60	-----
New Jersey.....	382,652.07	16,328.19	4,377.99	142,125.93	81,509.15	53,308.15	-----
New Mexico.....	170,482.19	13,250.41	2,063.67	100,949.94	30,513.24	-----	-----
New York.....	1,381,200.36	107,213.15	99,915.73	481,531.20	246,446.75	132,916.06	9,934.13
North Carolina.....	688,210.21	25,084.27	4,881.31	359,494.90	194,152.33	4,453.94	-----
North Dakota.....	266,037.79	18,724.99	4,182.90	154,495.20	16,466.45	10,340.78	-----
Ohio.....	806,913.15	56,347.75	16,654.20	318,982.51	98,590.93	71,000.07	2,074.28
Oklahoma.....	533,375.75	30,566.81	9,337.79	268,069.76	163,203.51	12,936.44	-----
Oregon.....	331,762.10	33,563.93	2,234.03	167,947.65	20,016.61	46,129.15	-----
Pennsylvania.....	847,051.35	70,510.93	5,124.88	387,403.36	137,528.00	17,885.74	17,191.00
Rhode Island.....	54,035.65	2,843.52	497.18	16,743.41	11,292.74	14,440.08	-----
South Carolina.....	453,458.27	28,519.38	4,731.48	201,387.58	126,071.36	9,661.34	-----
South Dakota.....	303,470.35	18,146.42	4,736.57	150,513.91	46,639.80	27,334.30	-----
Tennessee.....	505,129.32	29,590.99	7,413.54	262,297.61	116,827.49	5,980.36	3,447.37
Texas.....	1,071,237.76	30,868.83	5,636.26	596,682.29	351,002.55	-----	-----
Utah.....	150,737.56	17,237.45	884.07	77,826.49	21,598.82	3,840.79	-----
Vermont.....	188,243.13	14,804.67	1,933.40	59,542.22	42,160.84	43,670.30	-----
Virginia.....	558,895.02	26,125.59	14,153.47	284,693.34	117,738.26	9,978.35	-----
Washington.....	286,547.48	25,370.40	5,334.97	145,005.30	35,274.20	24,124.72	-----
West Virginia.....	430,175.56	28,315.75	9,310.45	157,789.06	67,067.56	94,521.87	-----
Wisconsin.....	520,794.12	18,174.46	15,810.02	274,357.22	12,435.61	26,050.88	-----
Wyoming.....	172,476.78	16,158.23	2,030.36	86,772.78	32,497.63	5,529.62	-----
Total, 1929.....	22,870,026.76	1,168,404.66	351,405.12	11,279,965.61	4,120,553.14	1,400,350.13	47,831.56
1928.....	20,677,423.66	1,104,828.92	281,366.44	10,428,075.46	3,473,385.97	1,213,207.16	88,648.02
1927.....	20,147,319.39	1,064,771.80	367,432.37	10,417,472.81	3,230,811.22	1,095,659.16	89,233.61
1926.....	19,485,492.81	1,084,480.88	426,746.12	10,132,616.26	3,142,681.57	1,069,465.82	94,996.20
1925.....	19,332,371.40	1,132,491.32	393,722.62	9,936,517.45	2,998,862.25	1,059,714.37	203,565.07
1924.....	19,082,025.04	1,201,783.43	389,321.11	9,999,271.48	2,831,269.37	991,490.45	575,250.46
1923.....	18,484,845.00	1,226,809.21	332,987.35	9,625,817.43	2,790,419.11	991,179.78	502,968.18
1922.....	17,181,751.64	1,159,074.59	408,983.22	8,946,340.45	2,400,789.74	1,054,388.85	470,378.09
1921.....	16,792,248.32	1,147,756.66	382,034.06	8,911,965.32	2,388,473.21	923,982.19	300,146.47
1920.....	14,658,079.92	995,051.57	308,629.24	7,665,170.77	2,177,024.52	883,615.86	332,415.38
1919.....	14,661,560.50	930,658.24	263,616.98	7,124,500.90	2,889,210.50	921,621.38	-----
1918.....	11,302,764.75	754,175.86	207,478.99	5,604,962.72	2,226,227.97	669,666.18	-----
1917.....	6,149,619.63	512,891.54	137,647.87	3,058,640.94	741,679.89	319,556.91	-----
1916.....	4,864,180.94	445,243.67	99,779.68	2,411,539.81	519,866.99	231,227.16	-----
1915.....	3,498,815.35	295,308.48	71,597.65	1,902,230.51	319,822.50	162,448.27	-----

TABLE 25.—*Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued*

State	Extension schools	Animal husbandry	Poultry	Dairying	Animal diseases	Agronomy	Foods and nutrition	Child care and training
Alabama.....	\$4,930.08	\$21,270.88	\$10,431.19	\$1,450.00	-----	\$4,254.04	\$4,465.41	-----
Arizona.....	-----	5,606.89	2,210.75	2,405.07	-----	6,411.87	-----	-----
Arkansas.....	2,136.87	4,363.94	3,617.84	5,142.77	-----	4,388.66	7,099.38	-----
California.....	4,542.90	-----	9,887.50	6,235.36	-----	5,255.52	5,968.13	-----
Colorado.....	-----	18,086.18	7,634.98	2,308.50	-----	7,824.30	3,734.17	-----
Connecticut.....	450.12	4,381.50	12,246.49	13,968.11	-----	5,944.04	5,293.97	-----
Delaware.....	-----	-----	-----	-----	-----	-----	1,529.86	-----
Florida.....	2,876.94	-----	9,224.43	5,193.36	-----	-----	8,108.45	-----
Georgia.....	-----	11,510.50	13,558.44	10,357.37	\$2,467.85	22,139.25	6,509.50	-----
Hawaii.....	-----	-----	-----	-----	-----	-----	-----	-----
Idaho.....	1,212.20	12,194.20	5,030.00	8,332.82	-----	21,245.64	-----	-----
Illinois.....	-----	7,673.77	4,467.88	10,112.17	2,820.99	12,697.93	3,831.87	\$3,046.91
Indiana.....	47,877.18	14,263.99	8,284.88	13,944.72	-----	11,297.97	6,314.83	-----
Iowa.....	3,378.42	15,074.43	8,953.43	34,589.67	4,536.62	15,473.10	11,321.55	609.06
Kansas.....	30,754.31	8,785.61	8,889.59	7,046.28	3,795.03	14,236.13	6,795.58	-----
Kentucky.....	7,742.39	15,069.14	12,416.44	7,233.03	4,206.37	10,752.20	7,130.26	-----
Louisiana.....	-----	5,997.00	9,013.43	4,547.31	-----	-----	-----	-----
Maine.....	487.52	-----	3,618.12	3,812.67	-----	1,891.47	4,665.03	-----
Maryland.....	2,497.97	4,730.30	4,898.44	11,095.60	-----	5,145.04	-----	-----
Massachusetts.....	6,450.73	4,347.06	5,930.71	27.89	-----	5,112.82	5,332.55	587.34
Michigan.....	-----	10,563.69	19,275.65	20,521.72	-----	52,851.02	8,286.86	1,459.69
Minnesota.....	-----	9,541.52	6,684.49	17,113.19	4,586.41	4,162.73	3,986.49	-----
Mississippi.....	-----	4,548.42	5,952.15	8,382.06	-----	-----	3,457.13	-----
Missouri.....	1,699.71	13,820.54	10,595.31	11,354.43	-----	23,762.07	5,090.27	-----
Montana.....	3,206.55	6,002.64	4,844.88	3,443.06	892.98	6,676.78	4,523.43	-----
Nebraska.....	-----	7,998.54	8,498.27	6,747.98	-----	8,529.38	6,120.44	-----
Nevada.....	-----	-----	1,048.05	1,983.50	-----	-----	-----	-----
New Hampshire.....	1,096.10	-----	4,465.07	4,467.91	-----	1,876.83	3,369.97	-----
New Jersey.....	-----	-----	12,048.47	11,851.34	-----	5,788.60	4,864.50	-----
New Mexico.....	-----	4,884.83	2,444.33	2,444.34	-----	5,495.60	-----	-----
New York.....	42,902.30	21,047.48	22,165.94	8,344.62	-----	27,915.58	11,629.70	8,863.65
North Carolina.....	-----	8,615.69	7,369.39	17,231.38	-----	15,758.67	3,940.22	-----
North Dakota.....	-----	6,048.54	3,584.76	4,601.39	4,753.01	4,438.95	6,918.60	-----
Ohio.....	37,368.54	20,471.73	12,898.77	11,447.82	-----	30,504.83	8,226.21	2,074.27
Oklahoma.....	-----	4,807.36	8,300.39	6,989.42	-----	4,238.31	4,099.24	-----
Oregon.....	-----	4,968.86	2,880.03	5,510.00	-----	5,604.75	3,713.11	-----
Pennsylvania.....	-----	18,489.21	20,225.38	42,904.02	-----	21,979.73	-----	-----
Rhode Island.....	-----	2,745.93	2,835.80	-----	-----	1,079.28	-----	-----
South Carolina.....	-----	9,820.98	7,180.55	8,729.60	-----	5,799.46	6,934.00	-----
South Dakota.....	-----	3,898.69	1,843.73	5,678.80	5,466.30	5,912.50	9,959.40	-----
Tennessee.....	5,527.01	15,270.15	8,423.49	10,730.26	-----	5,178.46	3,651.74	-----
Texas.....	-----	12,448.13	5,427.11	5,415.37	-----	5,569.52	3,972.62	-----
Utah.....	-----	3,037.33	1,357.40	158.11	-----	3,634.15	365.19	-----
Vermont.....	-----	-----	4,997.55	5,599.23	-----	3,190.91	-----	-----
Virginia.....	-----	9,061.81	14,757.21	16,523.28	-----	8,633.94	3,465.02	-----
Washington.....	-----	4,104.67	4,813.74	3,137.15	-----	7,059.86	3,834.51	-----
West Virginia.....	-----	8,632.61	8,176.28	6,891.67	-----	5,479.02	-----	-----
Wisconsin.....	30,000.00	20,571.28	7,496.68	18,443.39	-----	20,991.61	7,750.88	-----
Wyoming.....	-----	3,781.53	5,147.84	2,657.65	-----	5,069.67	3,543.40	-----
Total, 1929....	237,137.84	388,537.55	366,053.25	417,105.39	33,525.56	451,252.19	209,793.47	16,640.92
1928.....	229,514.13	409,316.08	348,698.64	356,780.70	36,688.66	437,965.97	194,941.97	-----
1927.....	244,949.38	417,323.02	325,016.76	337,172.79	30,799.85	403,985.27	187,264.08	-----
1926.....	258,241.06	345,716.18	313,069.02	333,597.75	30,424.76	399,490.81	187,897.17	-----
1925.....	261,868.23	368,775.08	281,094.93	383,405.85	35,842.58	413,403.27	153,450.45	-----
1924.....	246,408.66	355,517.40	284,732.27	395,267.26	36,761.09	417,858.06	-----	-----
1923.....	254,388.90	338,874.66	270,060.32	369,724.59	54,798.23	388,279.58	-----	-----
1922.....	219,213.29	334,436.03	241,417.41	289,773.00	40,492.07	350,605.55	-----	-----
1921.....	243,483.54	300,270.51	209,454.02	323,182.77	36,532.87	281,547.94	-----	-----
1920.....	239,453.36	231,141.57	151,161.93	276,917.62	63,200.89	218,019.26	-----	-----
1919.....	221,906.97	380,168.56	199,441.89	289,756.98	71,678.74	170,534.71	-----	-----
1918.....	237,364.78	309,270.72	70,402.84	332,852.55	31,777.11	153,211.24	-----	-----
1917.....	321,079.76	162,063.74	59,498.54	208,966.83	44,215.50	105,529.87	-----	-----
1916.....	322,726.80	131,937.90	47,328.49	172,557.69	21,936.02	77,859.05	-----	-----
1915.....	299,175.64	42,448.08	19,475.14	106,098.08	4,563.64	20,912.81	-----	-----

TABLE 25.—*Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued*

State	Clothing	Home manage- ment	Horticul- ture	Botany and plant pathology	Entomol- ogy, api- culture, or- nithology	Rodent pests	Forestry
Alabama.....	\$4,505.07	\$4,031.00	\$8,410.79		\$4,385.29		\$4,087.98
Arizona.....			1,136.38	\$1,405.65	743.31		
Arkansas.....	3,553.33		4,500.38				4,180.98
California.....	5,789.98	5,166.44	10,154.72				5,138.46
Colorado.....	4,986.57	1,076.99	1,498.14				1,411.06
Connecticut.....	3,989.55	4,722.13	11,399.26		2,501.99		2,167.27
Delaware.....				325.08	399.29		
Florida.....			2,000.00	3,337.05			
Georgia.....	4,242.62	3,563.28	16,331.40				8,987.68
Hawaii.....							250.00
Idaho.....	4,118.02		9,246.06		1,428.93	\$6,348.50	2,289.92
Illinois.....	3,427.46	4,123.72	8,013.82				3,960.00
Indiana.....	6,059.84		8,141.19	8,037.33	80.84		
Iowa.....	14,968.70	18,275.54	17,051.10	4,543.37	12,342.13		3,960.00
Kansas.....	9,282.98	4,232.81	6,412.73	4,221.14	4,853.94	1,486.26	
Kentucky.....	7,149.28		9,474.19				
Louisiana.....	3,958.47		9,614.77		6,928.15		3,160.85
Maine.....	4,665.03		2,507.30				3,340.46
Maryland.....			16,873.62	5,399.55	25,654.40		3,899.34
Massachusetts.....	5,671.49	4,576.13	15,605.27	44.87			3,960.00
Michigan.....	8,621.06	11,344.90	26,771.90		1,329.58		4,795.98
Minnesota.....	7,029.16	3,114.04	83.57	3,876.99	1,496.56		4,341.59
Mississippi.....		3,675.13	9,114.72				4,078.43
Missouri.....	12,918.76	8,844.04	2,398.08				
Montana.....	4,602.06	4,157.15	5,002.33	1,199.94	2,490.00		
Nebraska.....	5,910.97	6,714.58	3,960.89				4,769.76
Nevada.....							
New Hampshire.....	2,491.43	3,519.24	4,220.76				4,371.83
New Jersey.....	6,894.83	5,522.80	14,375.44				5,444.02
New Mexico.....			1,575.40				
New York.....	8,833.43	18,155.53	25,626.66	23,350.02	11,503.17		5,899.85
North Carolina.....	3,869.72	3,134.70	9,045.40	4,004.63	9,346.11		5,018.95
North Dakota.....	11,278.74	2,954.24					2,937.50
Ohio.....	11,631.73	9,010.58	26,031.36	6,396.78	13,578.03		3,684.93
Oklahoma.....	3,578.96		5,677.25		3,019.55		
Oregon.....			5,575.66			2,878.37	
Pennsylvania.....			27,336.53	15,720.57	21,399.62		10,675.27
Rhode Island.....			1,557.71				
South Carolina.....			9,668.20	1,756.96	7,961.21		
South Dakota.....	1,581.64		3,289.75		1,850.49		
Tennessee.....	1,800.01	1,800.00	4,837.16				4,294.25
Texas.....	4,657.68	7,319.55	5,553.54		5,408.61		3,960.00
Utah.....	2,933.08	2,894.77	2,124.91				
Vermont.....		4,011.81	1,042.90				3,303.07
Virginia.....	3,681.50	1,912.73	16,326.99	4,201.39			4,112.99
Washington.....	3,757.30	4,322.92	4,142.00				
West Virginia.....			17,959.80	2,616.65			4,047.60
Wisconsin.....	10,526.19	7,770.49	11,323.02	7,067.19			3,960.00
Wyoming.....	4,462.22		45.20		110.57	407.18	1,708.84
Total, 1929.....	207,428.86	159,947.24	403,038.25	97,505.16	138,811.77	11,120.31	132,198.86
1928.....	201,927.94	111,397.12	351,738.32	98,896.25	127,880.58	7,238.75	127,658.44
1927.....	205,573.74	108,726.04	357,276.69	93,007.15	121,702.18	7,406.84	115,836.77
1926.....	195,243.18	80,396.21	339,565.75	101,183.48	112,838.27	6,358.05	82,537.27
1925.....	183,231.83	69,871.68	317,171.49	101,697.38	104,265.73	144,785.47	30,918.78
1924.....			315,353.61	95,242.00	106,905.73	143,737.33	18,928.99
1923.....			316,237.49	84,167.35	111,120.36	176,222.72	14,187.56
1922.....			272,175.98	106,683.99	103,562.22	154,067.62	13,201.60
1921.....			244,885.75	246,405.00	98,490.86	158,167.12	10,936.54
1920.....			190,600.55	196,723.24	88,679.73	129,141.12	10,694.57
1919.....			163,788.79	286,997.69	112,474.45	151,373.85	9,499.45
1918.....			125,604.52	61,591.37	100,783.02	58,670.91	5,099.82
1917.....			84,069.57	32,596.15	14,826.22	16,435.68	9,558.50
1916.....			79,745.13	14,014.12	8,510.74		3,638.84
1915.....			29,927.89	4,923.17	3,940.00		3,965.44

TABLE 25.—*Expenditures of funds from all sources for cooperative agricultural extension work in States and Hawaii for the year ended June 30, 1929, by projects, and totals for 1915-1928—Continued*

State	Agricultural engineering	Farm management	Rural organization	Marketing	Exhibits and fairs	Publicity	Miscellaneous specialists
Alabama.....	\$8,988.93			\$10,870.55	\$2,759.19	\$122,700.31	
Arizona.....	129.89						
Arkansas.....				4,332.92		11,145.69	\$3,606.83
California.....	10,421.95	\$4,831.38		10,689.18	5,968.13		8,996.73
Colorado.....	3,793.81	5,771.48		1,498.51		8,968.89	1,699.11
Connecticut.....	2,765.96	5,502.02		7,794.87		3,550.00	
Delaware.....							
Florida.....						2,584.75	
Georgia.....	10,422.39	3,150.37		9,123.84	3,266.40	13,426.59	97,725.13
Hawaii.....							
Idaho.....	2,700.00						
Illinois.....	3,960.11	9,988.66		160.55		3,702.49	
Indiana.....	2,364.29	7,456.29				2,300.00	
Iowa.....	4,186.39	8,045.89	\$4,277.64	35,722.17	3,414.06	10,089.11	8,452.74
Kansas.....	10,585.74	5,123.99	506.45	6,383.38		6,132.34	
Kentucky.....	5,513.16	5,869.25		8,074.90		4,888.90	
Louisiana.....			3,753.78	2,038.52		6,554.61	
Maine.....		5,234.41				4,050.00	
Maryland.....			3,030.00	8,332.01		4,257.10	
Massachusetts.....	63.93	6,523.99		5,034.20	2,178.87	4,047.34	
Michigan.....	24,829.36	3,284.12	494.44	16,441.74		21,873.60	
Minnesota.....		7,062.13		2,110.81		7,160.00	
Mississippi.....	5,179.92		5,142.73	12,536.22		1,200.00	
Missouri.....	8,117.43	4,950.44	3,695.78	4,828.02		4,996.11	
Montana.....	4,319.74	9,925.52				4,643.80	
Nebraska.....	14,365.91	4,762.86	3,804.98	3,208.34		7,041.46	
Nevada.....	3,199.92					1,200.00	
New Hampshire.....		4,614.82					
New Jersey.....	1,885.77	7,762.50				8,564.39	
New Mexico.....	1,143.34	1,765.64				3,951.45	
New York.....	15,282.84	19,203.61	7,975.24			24,543.72	
North Carolina.....	4,831.30			305.56		5,486.78	2,184.96
North Dakota.....	3,293.07	3,886.32		427.65		6,141.54	563.16
Ohio.....	14,128.49	18,339.36	5,469.87	9,698.81		2,301.30	
Oklahoma.....	4,404.44	4,138.02				8.50	
Oregon.....	5,599.15	2,294.70		14,449.35		8,396.75	
Pennsylvania.....		12,755.89	5,247.19	10,494.39		4,000.00	179.64
Rhode Island.....							
South Carolina.....	2,899.73			15,020.43		7,316.01	
South Dakota.....	4,554.24	3,035.36		5,509.18		3,519.27	
Tennessee.....		9,035.13		5,372.67		3,651.63	
Texas.....	5,376.54		8,510.48			13,428.68	
Utah.....	10,138.13						2,706.87
Vermont.....		3,716.23				270.00	
Virginia.....	9,023.15	3,738.87	3,862.31	3,738.88		3,165.94	
Washington.....	8,878.58	3,605.26			1,006.55	2,775.35	
West Virginia.....		1,850.37	9,470.58			1,500.00	6,546.29
Wisconsin.....	4,306.67	4,344.70		16,486.83		2,927.00	
Wyoming.....	2,400.00				154.06		
Total, 1929.....	224,054.27	201,569.58	65,241.47	230,684.48	18,747.26	358,461.40	132,661.46
1928.....	171,075.62	177,215.46	64,264.25	216,306.98	22,998.56	233,881.30	161,525.97
1927.....	158,365.17	178,545.66	69,182.30	172,233.35	37,105.50	154,675.85	155,790.03
1926.....	159,051.02	161,629.62	65,695.89	160,364.10	41,539.07	54,239.87	105,427.43
1925.....	155,621.08	169,453.91	64,422.16	169,131.52	22,299.87	45,968.20	130,818.83
1924.....	167,832.95	156,455.94	50,843.31	177,435.75	24,888.34	13,070.96	86,399.09
1923.....	177,600.66	163,830.70	37,049.51	171,271.52	18,521.48		68,328.25
1922.....	128,178.32	152,623.81	21,318.83	204,185.86	10,311.31		99,549.81
1921.....	124,742.98	146,080.43	22,518.19	259,041.53	20,078.60		12,071.76
1920.....	125,161.36	116,381.31	30,025.75	179,620.88	23,245.03		26,004.41
1919.....	97,295.29	125,614.03	49,575.14	163,927.62	10,529.41		27,388.93
1918.....	64,517.11	102,302.00	42,152.51	104,268.49	13,159.98		27,224.06
1917.....	50,600.78	102,033.20	46,194.46	50,237.47	12,482.49		58,813.72
1916.....	36,680.32	88,469.26	39,447.36	20,493.57	12,650.06		78,528.28
1915.....	13,041.60	51,531.27	5,060.34	2,298.60	14,019.21		126,027.03

TABLE 26.—Expenditures from United States appropriation authorized May 22, 1928 (Federal Capper-Ketcham), for cooperative agricultural extension work in each State and Hawaii for year ended June 30, 1929, by items of expenses

State	Total appro- priation	Personal services	Publica- tions	Supplies	Communi- cation service	Transpor- tation	Heat, light, water, power	Equip- ment	Travel expenses	Miscella- neous	Unexpended balance
Alabama	\$20,000	\$19,024.33							\$975.67		
Arizona	20,000	18,534.88		\$23.47	\$3.20	\$0.94			1,437.51		
Arkansas	20,000	19,001.18		198.03				\$487.59	2,294.25	\$18.95	
California	20,000	8,199.06							2,091.62		\$9,709.32
Colorado	20,000	17,434.38		143.35	35.11	3.41		43.75	2,340.00		
Connecticut	20,000	18,154.64			2.40				1,765.32		77.64
Delaware	20,000	19,883.37		12.04					12.15		92.44
Florida	20,000	16,445.63	\$431.80	1.50					189.13		2,931.94
Georgia	20,000	18,982.49			3.16				836.84		177.51
Hawaii	20,000	8,192.42		107.21	54.85				1,480.90	2.50	10,092.55
Idaho	20,000	7,103.03	562.52	380.75	64.32	33.47		36.10	2,247.25	192.15	9,260.51
Illinois	20,000	4,875.77		247.68	340.00	56.19		133.28	543.19	4.00	12,571.51
Indiana	20,000	19,703.90		63.24				1,417.85	232.86		
Iowa	20,000	20,000.00									
Kansas	20,000	18,879.00							1,121.00		
Kentucky	20,000	17,198.48							2,801.52		
Louisiana	20,000	10,430.75	87.20	175.98	.50		\$2.44	49.92	695.20		8,558.01
Maine	20,000	19,575.37							424.63		
Maryland	20,000	19,583.32			2.85				413.83		
Massachusetts	20,000	18,300.00	196.73		18.65				1,484.62		
Michigan	20,000	19,539.53							460.47		
Minnesota	20,000	16,044.72									
Mississippi	20,000	19,208.87							791.13		3,955.28
Missouri	20,000	20,000.00									
Montana	20,000	12,672.22	507.17	486.59	.70			138.19	58.20	57.40	6,079.53
Nebraska	20,000	18,209.85	460.25					120.00	1,205.90		
Nevada	20,000	18,325.00		245.94				320.30	1,108.76		
New Hampshire	20,000	19,994.00							6.00		
New Jersey	20,000	13,880.21		225.51				147.03	1,195.60		4,550.83
New Mexico	20,000	9,108.62		172.06	55.20	.82		13.75	2,248.75	48.65	8,351.47
New York	20,000	19,750.44				1.50		150.00			99.56
North Carolina	20,000	19,115.30									
North Dakota	20,000	16,101.06		90.40	63.32			13.80	884.70		
Ohio	20,000	19,406.57			.58				3,675.67	5.75	
Oklahoma	20,000	19,276.62	76.00		120.56				592.85		.60
Oregon	20,000	18,594.88							526.58		1,405.12
Pennsylvania	20,000	17,190.87							2,809.13		
Rhode Island	20,000	11,075.85							255.76		8,668.39
South Carolina	20,000	20,000.00									

TABLE 26.—Expenditures from United States appropriation authorized May 22, 1928 (Federal Capper-Ketcham), for cooperative agricultural extension work in each State and Hawaii for year ended June 30, 1929, by items of expenses—Continued

State	Total appro- priation	Personal services	Publica- tions	Supplies	Communi- cation service	Transpor- tation	Heat, light, water, power	Equip- ment	Travel expenses	Miscella- neous	Unex- pended balance
South Dakota	\$20,000	\$18,620.43		\$13.64	\$16.37	\$1.14			\$1,348.42		
Tennessee	20,000	16,873.69	\$779.45	1,064.75	.01				1,282.10		
Texas	20,000	20,000.00									
Utah	20,000	17,753.30		819.97	334.90			\$5.70	1,086.13		
Vermont	20,000	17,691.83		235.52	11.31	2.30		372.81	1,671.82	\$14.41	
Virginia	20,000	17,620.33	1,358.04	231.60	392.21	61.63	\$16.55		299.94	19.70	
Washington	20,000	14,843.46	318.00	1,067.45	19.59	108.65	3.25	563.08	759.14	374.85	\$1,937.53
West Virginia	20,000	20,000.00									
Wisconsin	20,000	17,875.80	56.27	9.94	20.08				2,037.06	.85	
Wyoming	20,000	19,537.39									462.61
Total	980,000	827,862.48	4,837.43	6,016.62	1,559.87	270.05	22.24	4,018.15	45,691.60	739.21	88,982.35

TABLE 27.—Expenditures from the United States appropriation authorized May 22, 1928 (Federal Capper-Ketcham), for cooperative agricultural extension work in each State and Hawaii for the year ended June 30, 1929, by projects

State	Total	Adminis- tration	Printing and dis- tribution of publi- cations	County agent work	Home dem- onstration work	Boys' and girls' club work	Farm man- agement	Poultry	Dairying	Rural or- ganization	Agronomy
Alabama	\$20,000			\$10,299.33	\$6,625.00	\$3,075.67					
Arizona	20,000			8,737.23	10,202.27	1,060.50					
Arkansas	20,000			8,724.58	7,668.59						
California	20,000			2,806.62	7,484.06						
Colorado	20,000			10,189.41	8,398.26	300.00					
Connecticut	20,000			630.20	7,408.00	11,801.11	\$83.05				
Delaware	20,000	\$11.45		6,000.00	6,333.96	6,800.00					
Florida	20,000		\$431.80	7,590.38	8,188.94	855.44					
Georgia	20,000			7,737.32	8,748.33						
Hawaii	20,000			5,478.65	4,428.80						
Idaho	20,000		562.52	3,328.54	4,296.93	1,006.54		\$1,544.96			
Illinois	20,000	2,027.53			2,087.66	3,313.30					
Indiana	20,000	19.45		52.18	7,411.11	12,185.19		59.55			\$270.42
Iowa	20,000			2,272.49	9,640.58	8,086.93		129.89			960.32
Kansas	20,000	29.78		4,247.66	12,629.27						
Kentucky	20,000			14,541.70	5,458.30						
Louisiana	20,000	95.37	87.20	8,468.43	2,246.69	831.62					
Maine	20,000			4,866.00	7,355.21	115.05		\$163.30		\$6.00	
Maryland	20,000			12,123.22	7,876.78	7,778.79					
Massachusetts	20,000		196.73	1,127.78	3,045.11	14,906.07					
Michigan	20,000	56.33		10,309.73	2,931.52	3,948.46					38.61
Minnesota	20,000			1,701.65	4,772.25	9,570.82					
Mississippi	20,000	1,016.74		7,085.94	11,897.32						
Missouri	20,000			6,150.00	13,615.00	235.00					
Montana	20,000		491.85	6,053.01	3,879.17		2,518.39				
Nebraska	20,000	167.10	464.25	6,141.82	6,359.78	5,430.62	55.90	177.94	123.79		643.67
Nevada	20,000			8,875.00	11,125.00						
New Hampshire	20,000	384.88		7,666.66	1,745.82	8,265.41					
New Jersey	20,000			3,007.57	3,819.92	6,028.12					
New Mexico	20,000			4,665.01	6,983.52						
New York	20,000			6,960.88	5,052.14	6,991.39					
North Carolina	20,000			8,858.34	7,701.40						
North Dakota	20,000			15,254.12	4,745.88						
Ohio	20,000		76.00	9,951.99	10,048.01						
Oklahoma	20,000			11,394.08	8,118.81			72.70	16.58		
Oregon	20,000	2,325.00		5,236.55	7,503.33	1,855.00			850.00		
Pennsylvania	20,000			3,903.33	16,096.67						
Rhode Island	20,000	137.50		4,097.26	3,392.75	3,482.26					75.00
South Carolina	20,000			10,000.00	10,000.00						
South Dakota	20,000			2,573.33	8,904.71	8,521.96					

[illegible]

TABLE 28.—Number of counties in each State having men county extension agents (white), July 1, 1914–1929

State	Num-ber of coun-ties	July 1—															
		1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Alabama	67	67	67	65	62	66	65	55	55	55	54	59	59	57	56	61	63
Arizona	14	---	3	6	7	11	11	10	9	11	11	10	12	12	12	12	12
Arkansas	75	45	52	53	61	68	66	58	44	40	47	45	50	48	63	64	64
California	58	4	11	13	17	33	35	35	37	40	41	40	43	41	40	40	39
Colorado	63	13	13	19	16	29	27	24	24	26	23	28	20	22	24	27	32
Connecticut	8	1	6	7	8	8	8	8	8	8	7	8	8	8	8	8	8
Delaware	3	---	3	3	2	3	3	3	3	3	3	3	3	3	3	3	3
Florida	67	25	36	33	37	53	47	32	31	33	37	33	36	41	45	48	47
Georgia	161	80	81	83	117	120	134	97	85	98	88	89	121	90	95	101	96
Idaho	44	2	3	7	11	27	32	34	32	28	21	19	16	18	23	24	24
Illinois	102	14	18	20	22	53	63	81	85	85	94	95	95	95	96	94	95
Indiana	92	27	31	32	40	83	76	68	82	85	86	82	79	82	81	85	85
Iowa	99	9	11	16	26	97	99	99	99	99	99	98	99	97	98	99	99
Kansas	105	9	39	56	53	67	53	51	59	56	58	57	63	64	64	66	71
Kentucky	120	28	39	47	45	90	71	53	61	61	59	67	72	71	70	86	90
Louisiana	64	41	43	43	42	58	55	41	38	45	45	46	48	51	52	56	54
Maine	16	---	3	4	9	16	16	16	16	16	16	16	16	16	16	16	16
Maryland	23	8	13	16	23	22	23	22	23	22	23	23	23	23	23	22	23
Massachusetts	14	1	10	9	11	13	13	11	11	11	11	12	11	11	11	11	11
Michigan	83	11	17	22	30	71	63	60	64	69	64	57	57	54	53	55	62
Minnesota	87	27	23	19	16	85	86	82	83	77	67	62	58	61	60	62	63
Mississippi	82	48	49	44	53	79	75	71	50	56	56	56	54	56	60	63	77
Missouri	114	13	15	14	15	71	52	47	58	55	54	53	50	69	65	74	175
Montana	55	4	8	7	12	23	24	27	26	26	24	23	23	26	29	30	31
Nebraska	93	5	8	9	8	79	54	39	46	42	42	41	43	40	39	39	45
Nevada	17	---	---	---	6	8	4	6	7	9	11	11	8	8	9	11	14
New Hampshire	10	1	5	8	9	10	10	9	10	10	10	10	10	10	10	10	10
New Jersey	21	4	7	11	10	17	18	18	18	18	18	19	18	18	19	19	19
New Mexico	31	---	8	9	11	25	26	22	19	18	22	20	21	19	20	21	22
New York	62	25	29	36	41	56	55	55	55	55	55	56	55	55	55	55	55
North Carolina	100	51	64	65	69	91	87	77	59	66	73	76	74	74	78	80	84
North Dakota	53	17	15	15	17	38	32	28	36	36	33	34	33	33	33	33	31
Ohio	88	8	10	12	20	63	65	63	80	83	85	81	85	83	80	78	79
Oklahoma	77	40	56	59	62	77	70	73	71	74	67	61	65	68	69	69	70
Oregon	36	10	12	13	14	24	23	26	26	24	22	21	28	28	26	27	28
Pennsylvania	67	10	14	22	45	53	40	54	57	63	60	63	63	64	65	65	65
Rhode Island	5	---	---	4	4	5	4	4	4	4	4	4	5	5	3	4	15
South Carolina	46	43	43	42	40	43	45	45	42	42	38	39	40	39	39	40	42
South Dakota	69	3	5	11	13	59	36	39	43	48	43	36	34	35	34	33	32
Tennessee	95	36	38	48	57	91	76	45	38	41	48	54	50	53	58	61	62
Texas	254	98	99	90	92	178	168	127	128	143	148	149	155	164	164	162	166

Utah	29	8	10	8	15	28	22	21	19	19	22	21	18	19	19	20	22
Vermont	14	7	9	11	13	13	13	12	13	13	11	13	12	13	13	13	12
Virginia	100	53	55	51	53	75	71	57	61	67	70	65	65	67	70	71	73
Washington	39	7	10	13	22	34	29	32	31	28	24	25	26	26	26	27	28
West Virginia	55	13	27	29	45	48	48	40	31	40	39	39	36	44	43	44	43
Wisconsin	71	9	12	13	22	59	41	42	50	50	47	47	48	52	54	51	53
Wyoming	24	3	6	8	13	15	13	14	16	16	16	18	16	16	17	18	19
Hawaii	5																4
Total	3,077	928	1,136	1,225	1,436	2,435	2,247	2,033	2,043	2,114	2,096	2,084	2,124	2,149	2,191	2,256	2,323

¹ Some agents serve two or more counties.

TABLE 29.--Number of counties in each State having women county extension agents (white, home demonstration work), July 1, 1914-1929

State	Num-ber of coun-tries	July 1—															
		1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Alabama	67	18	19	27	28	67	54	32	36	34	34	35	37	38	38	39	41
Arizona	14	---	---	---	---	3	6	6	8	10	9	11	9	8	9	18	10
Arkansas	75	15	20	31	47	65	58	42	34	32	38	42	39	35	42	46	56
California	58	---	---	---	---	24	8	10	10	16	21	23	22	23	26	25	140
Colorado	63	---	---	2	---	7	3	2	1	2	2	4	2	6	5	11	16
Connecticut	8	---	---	---	5	8	6	6	3	5	6	6	7	6	6	6	8
Delaware	3	---	---	---	1	3	2	---	---	---	---	---	---	---	---	---	3
Florida	67	24	27	28	35	54	42	29	28	29	24	31	30	32	30	28	35
Georgia	161	29	48	45	57	125	93	66	66	70	68	64	61	61	58	70	77
Idaho	44	---	---	---	---	24	4	5	5	21	30	30	27	18	10	143	144
Illinois	102	---	---	1	---	88	17	11	11	11	16	21	21	22	22	20	24
Indiana	92	---	---	---	---	22	8	5	3	2	2	1	1	1	1	1	8
Iowa	99	---	---	---	---	96	23	19	21	18	17	13	15	12	14	12	22
Kansas	105	---	---	---	---	14	8	9	7	8	9	10	15	17	16	23	28
Kentucky	120	9	19	24	27	96	74	18	19	26	24	24	24	25	21	20	26
Louisiana	64	13	13	18	20	33	32	24	25	26	28	28	24	25	25	38	37
Maine	16	---	---	---	---	14	2	5	10	14	15	15	15	15	15	15	16
Maryland	23	5	6	10	13	22	23	21	17	16	17	18	19	19	18	20	23
Massachusetts	14	---	---	1	6	12	10	9	9	11	9	10	11	11	11	11	11
Michigan	83	---	---	1	1	24	13	12	10	8	7	7	5	5	5	6	9
Minnesota	87	---	---	---	---	39	8	8	7	4	3	8	8	8	6	4	9
Mississippi	82	33	33	32	49	71	64	53	35	48	51	45	44	43	47	50	69
Missouri	114	---	---	---	---	48	20	11	14	13	8	11	9	9	7	12	14
Montana	55	---	---	---	---	18	11	9	7	11	7	5	6	6	7	12	10
Nebraska	93	---	---	---	2	30	10	7	7	3	3	2	2	1	1	8	9
Nevada	17	---	---	1	---	10	5	5	6	4	4	4	9	9	6	8	10
New Hampshire	10	---	---	---	2	9	6	3	5	6	8	7	8	8	9	10	18
New Jersey	21	---	---	1	---	11	5	8	7	9	8	12	11	12	12	13	10
New Mexico	31	---	---	---	---	8	5	4	4	2	4	4	5	4	5	4	10
New York	62	---	---	1	3	38	24	22	28	31	32	35	38	37	34	35	39
North Carolina	100	27	34	44	48	72	66	59	47	49	50	48	49	49	49	49	56
North Dakota	53	---	---	---	2	33	5	4	2	6	2	2	1	1	1	1	7
Ohio	88	---	---	1	---	13	5	2	7	10	8	11	15	15	16	19	23
Oklahoma	77	19	24	22	23	50	46	40	36	37	42	50	44	47	49	50	57
Oregon	36	---	---	---	---	15	5	5	6	4	4	3	3	3	2	3	5
Pennsylvania	67	---	---	1	---	48	---	---	---	---	28	28	28	54	63	165	165
Rhode Island	5	---	---	---	---	4	---	2	3	5	2	2	2	2	2	---	15
South Carolina	46	21	24	31	36	44	45	45	36	36	36	38	38	34	36	35	39
South Dakota	69	---	---	---	---	42	3	3	1	1	15	19	32	32	35	134	147
Tennessee	95	18	24	31	49	94	77	41	26	25	28	27	26	27	27	27	34
Texas	254	26	27	38	31	67	69	55	38	52	79	91	88	90	88	89	103

Utah-----	29	-----	-----	2	14	4	6	3	15	4	5	11	9	8	16	19
Vermont-----	14	-----	-----	-----	7	5	4	6	9	10	9	7	5	5	8	11
Virginia-----	100	17	22	25	52	36	28	23	30	34	36	35	34	34	33	36
Washington-----	39	-----	-----	-----	22	6	8	7	7	6	5	5	5	5	6	11
West Virginia-----	55	5	10	12	33	22	12	8	18	15	23	15	17	17	18	28
Wisconsin-----	71	-----	-----	-----	17	4	2	1	1	1	1	1	1	1	2	4
Wyoming-----	24	-----	-----	-----	5	7	7	6	6	6	6	5	5	6	6	9
Hawaii-----	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3
Total-----	3,077	279	350	430	1,715	1,049	784	699	801	874	930	929	946	950	1,041	1,286

¹ Some agents serve two or more counties.

